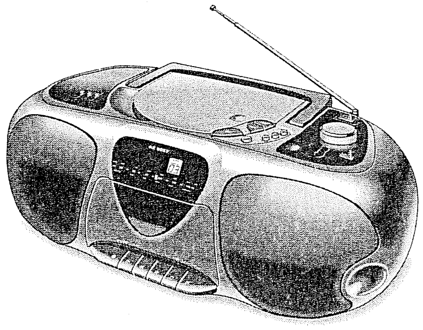
PHIL- 04947

CD Stereo Radio Recorder

AZ8055/17
AZ8056/01
AZ8057/00/05

Service
Service
Service



Service Manual

COMPACT
disc
DIGITAL AUDIO

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chapter

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Service Manual *CD drive* ***RCD1.3D***

CLASS 1
LASER PRODUCT

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PHILIPS

klar

4947

TECHNICAL SPECIFICATION

General:

Mains voltage : 220V-230V / 50Hz for /00 /14
230V-240V / 50Hz for /05 /10
110V-127V / 220V-240V /50Hz switchable for /01
120V / 60Hz for /17
100V / 50Hz for /06

Battery : 9V (6xR20)

Power consumption : ≤ 20W at maximum output power
≤ 5W in stand by

Amplifier:

Power stage protection : temperature and shortcircuit

Output power mains : 2 x 1,6W$_{rms}$ -1dB at 4W D=10%
battery : 2 x 1,6W$_{rms}$ -1dB at 4W D=10%
Headphone : 3,5mm stereo jack, ≥ 20mW at 32Ω (≡ 0,8V at 32Ω) D=10%

Frequency response : 30Hz - 16kHz (typ. at volume set to -20dB, CD mode 0dB signal level ⇒use SBC429)

Tone control
DBB[1] : +10dB at 100Hz (volume set to -20dB)

Equalizer[1]
100Hz : ±8dB
1kHz : ±8dB
10kHz : ±8dB

Tuner:

	FM	MW	LW[1]
Tuning range	87,5 - 108 MHz (65 - 108 MHz for /14) (76 - 108 MHz for /06)	525 - 1607 kHz (530 - 1710 kHz for /01/17)	148,5 - 284 kHz
IF	10,7 MHz ± 20 kHz	468 kHz ± 3 kHz	468 kHz ± 3 kHz
Sensitivity Mono: 26dB S/N, m=30%	≤ 4 µV (≤ 2µV typ.)	≤ 4mV/m (≤ 1,5mV/m typ.)	≤ 6mV/m (≤ 4,5mV/m typ.)
-3 dB limiting point	≤ 5 µV (≤ 2µV typ.)		
AFC capture range	±300kHz		
Distortion	≤ 7% (≤ 1% typ.) RF=1mV Δf=75kHz	≤ 7% (≤ 3% typ.) RF=100mV/m m=80%	≤ 7% (≤ 3% typ.) RF=100mV/m m=80%
Image rejection ratio	≥ 20dB (26dB typ.)	≥ 28dB	≥ 30dB
Channel separation at 1kHz	≥ 20dB (25dB typ.)		

CD:

To be measured on phone socket with 100kΩ load.

Frequency response : 30 - 16.000 Hz -3dB
Signal/Noise ratio : ≥ 80dB
Distortion : ≤ 0.3% at 1 kHz
Channel difference : ≤ 3dB at 1 kHz
Channel crosstalk : 35dB max.
De emphasis : 0 or 15/50µs switched automatically by subcode on the disc

Laser
Output power : 500µW
Wave length : 780 ± 20 nm

Recorder: To be measured on phone socket with 100kΩ load.

Tape speed	: 4,76cm/s ±3%
Wow & Flutter	: ≤ 0,5% weighted
Winding speed	: 130s for C60 cassette
Erase / Bias system	: permanent magnetic erase head / AC 60 ±5kHz
Distortion at 250 nWb/m	: ≤ 7%
Signal/Noise ratio (FF weighted)	: ≥ 40dB
(A - weighted)	: ≥ 43dB
Channel difference at PB	: ≤ 3dB
Channel difference overall	: ≤ 5dB
Channel separation	: ≥ 15dB at 1kHz
Track separation	: ≥ 55dB at 1kHz

Frequency response IEC I	
PB	: 125Hz - 8000Hz (within 8dB)
overall	: 250Hz - 6300Hz (within 8dB)

note: set is not prepared to play or record *IEC II Chrome* cassettes!

****

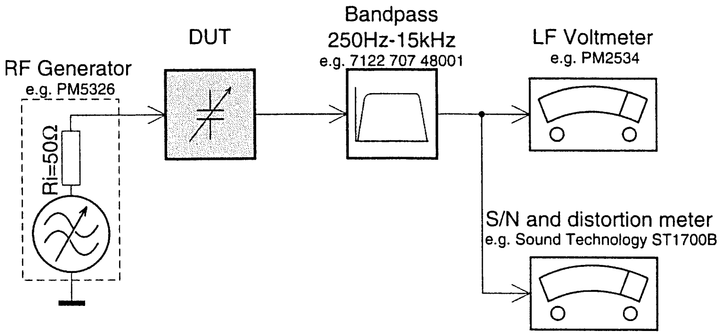
1)*Remote Control:* RC5 commands

Remote Control key	System Code	Command CODE
PLAY	21	53
STOP	21	54
NEXT (PRESET UP)	21	32
PREVIOUS (PRESET DOWN)	21	33
VOLUME UP	21	16
VOLUME DOWN	21	17

1) not in all versions

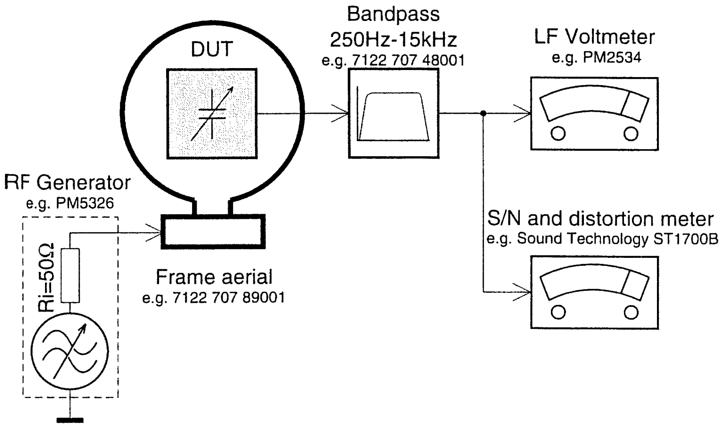
Measurement setup

Tuner FM


Bandpass
250Hz-15kHz
e.g. 7122 707 48001
DUT
LF Voltmeter
e.g. PM2534
RF Generator
e.g. PM5326
Ri=50Ω
S/N and distortion meter
e.g. Sound Technology ST1700B

Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilottone (19kHz, 38kHz).

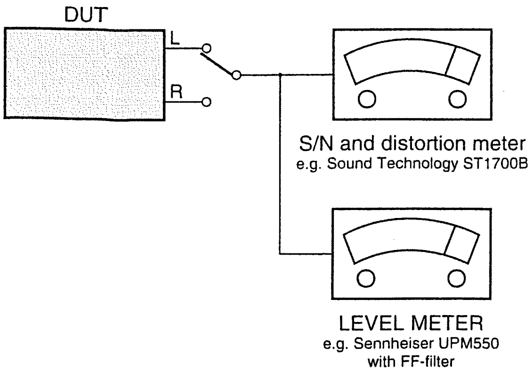
Tuner AM (MW,LW)


Bandpass
250Hz-15kHz
e.g. 7122 707 48001
DUT
LF Voltmeter
e.g. PM2534
RF Generator
e.g. PM5326
Ri=50Ω
S/N and distortion meter
e.g. Sound Technology ST1700B
Frame aerial
e.g. 7122 707 89001

To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday´s cage.
Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

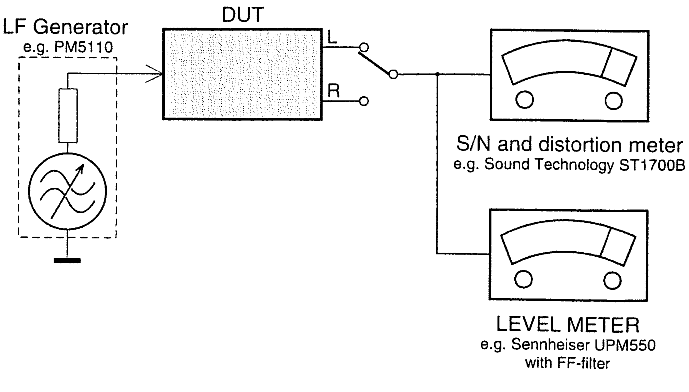
CD

Use Audio Signal Disc SBC429 4822 397 30184
(replaces test disc 3)

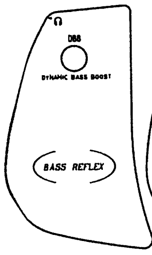

DUT
L
R
S/N and distortion meter
e.g. Sound Technology ST1700B
LEVEL METER
e.g. Sennheiser UPM550
with FF-filter

RECORDER

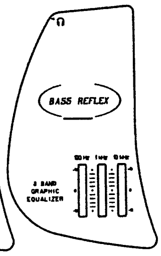
Use Universal Test Cassette **CrO₂** SBC419 4822 397 30069
or Universal Test Cassette **Fe** SBC420 4822 397 30071


LF Generator
e.g. PM5110
DUT
L
R
S/N and distortion meter
e.g. Sound Technology ST1700B
LEVEL METER
e.g. Sennheiser UPM550
with FF-filter

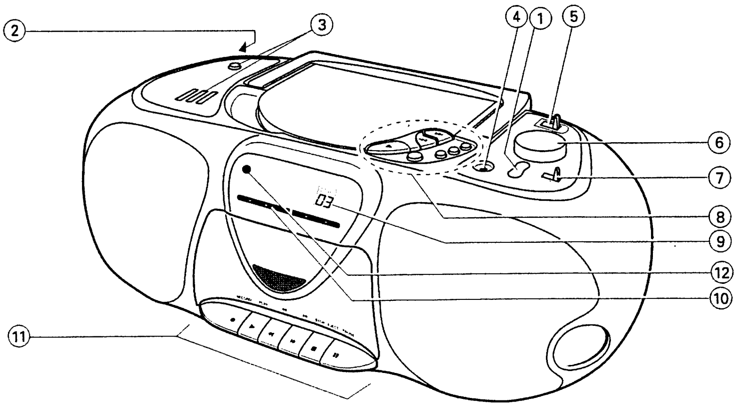
CONNECTIONS & CONTROLS

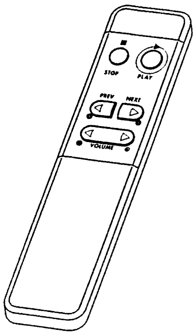


AZ8055, AZ8056



AZ8057





① VOLUME +/- ....to adjust the volume level

② 🎧 (at the back)....3.5mm headphone socket.
Note: Inserting the plug will disconnect the speakers.

③
DBB ....Dynamic Bass Boost:
to increase the bass level
or
3 BAND GRAPHIC EQUALIZER: to adjust the sound to your taste

④ MIC ....3.5mm microphone socket
(see RECORDING)

⑤ POWER.................to select the sound source:
CD-TAPE/OFF-RADIO

RADIO:

⑥ TUNING ....to tune to radio stations
⑦ FM-MW-LW.........to select the wave band
⑩ Indicator for radio tuning

CD PLAYER:

⑧ OPEN·CLOSE........to open/close the CD lid
PLAY·PAUSE ▶ ...to start and to interrupt CD play
SEARCH ⏮ ⏭ ...to skip and to search forwards and backwards
STOP ■.................to stop play and to erase a program
SHUFFLE ....to play in random order
REPEAT.................to repeat one track or to repeat the CD or program
PROG ....to program track numbers
and to review the program

⑨ CD Display

CASSETTE RECORDER:

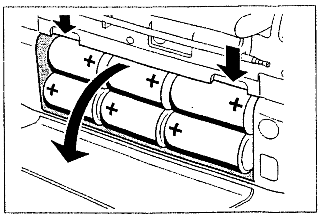
⑪ RECORD ● ....to start recording
PLAY ▶ ....to start playback
◀◀ ....to rewind the tape
▶▶ ....to wind the tape
STOP·EJECT ■ .....to stop the tape and to open
the cassette compartment
PAUSE ❚❚...............to interrupt recording or playback

⑫ SENSOR ....Infrared remote sensor for remote control reception

REMOTE CONTROL:

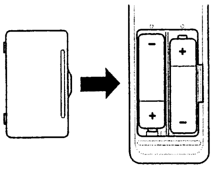
STOP ■.................CD: to stop CD play
PLAY ▶.................CD: to start CD play
◀ PREV/NEXT ▶ ..CD: to skip forwards and backwards
VOLUME ◀ ▶......to adjust the volume level

Batteries

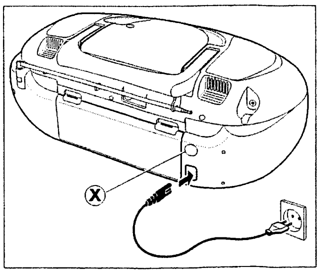


- Open the battery compartment and insert six batteries, type R20, UM-1 or D-cells (preferably alkaline). Remove the batteries if they are empty or the set is not to be used for a long time.

- ***Remote control:*** Open the battery compartment and insert two batteries, type AAA, R03 or UM-4.
Remove the batteries if they are empty or the set is not to be used for a long time.



Mains



1 Check if the mains voltage as shown on the type plate (on the base of the set) corresponds to your local mains voltage. If it does not, consult your dealer or service organisation.

If the set is equipped with a VOLTAGE selector Ⓧ, set this selector to the local mains voltage.

2 Connect the mains lead to the MAINS outlet and the wall socket. The mains supply is switched on.

- The battery supply is switched off when the set is connected to the mains. To change over to battery supply, pull out the plug from the unit's MAINS socket.

- To disconnect the set from the mains completely, withdraw the mains plug from the wall socket.

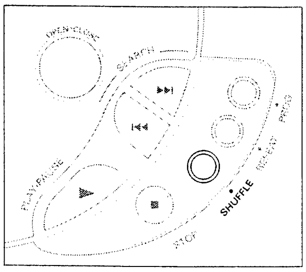
Brief excerpt of the INSTRUCTION FOR USE

CD PLAYER

SHUFFLE – playing in random order

1 Press SHUFFLE before or during CD play.
→ All the tracks will now be played in a random order.

2 To return to normal CD play, press SHUFFLE.

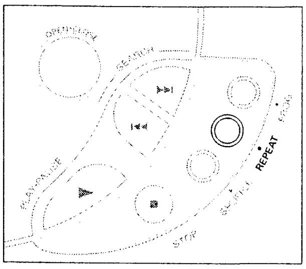

OPEN·CLOSE
SEARCH
PROG
REPEAT
SHUFFLE
PLAY·PAUSE
STOP

REPEAT – Repeating the entire CD or one track of the CD

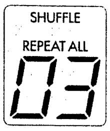
1 Before or during CD play, press repeated REPEAT to cause the display showing the different repeating modes.

→ **REPEAT**: the current track is played repeatedly.
→ **REPEAT ALL**: the entire CD or program is played repeatedly.

2 To return to normal CD play, press REPEAT until the display indication disappears.


OPEN·CLOSE
SEARCH
PROG
REPEAT
SHUFFLE
PLAY·PAUSE
STOP

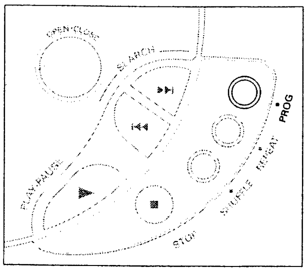
Note: You can activate the different playing modes at the same time, e.g. to ***repeatedly*** *play the entire CD or program* ***in random order*** *(REPEAT ALL/SHUFFLE)*


SHUFFLE
REPEAT ALL
03

Example
Display indication when the respective playing mode is activated.

Programming track numbers

You may select a number of tracks and store these in the memory in the desired sequence. You may store any track more than once. At most, 20 tracks can be stored in the memory.

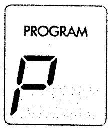

OPEN·CLOSE
SEARCH
PROG
REPEAT
SHUFFLE
PLAY·PAUSE
STOP

1 Select with SEARCH ⏮ or ⏭ the desired track.

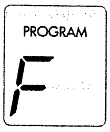
2 As soon as the desired track is displayed, press the PROG button to store the track in the memory.
→ On the display PROGRAM appears and P lights briefly up.
After that the stored track number is shown.

3 Select and store in this way all desired tracks.

- You can review your settings by pressing the PROG button for more than 2 seconds.
→ The display shows in sequence all stored track numbers.



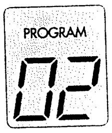
Display indication:
when you store a track.



Display indication
when you try to store
more than 20 tracks.

Playing the program

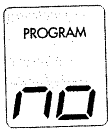
- If you have selected the tracks in the STOP position, press PLAY·PAUSE ►.
- If you have selected the tracks during CD play, press first STOP ■ and then press PLAY·PAUSE ►.



Example
Display indication when you play the program.

Erasing the program from the STOP position

- From the stop position, press STOP ■.
  → PROGRAM disappears on the display and your program is erased.



Display indication when you erase a program.

Note: The program will also be erased
- if you interrupt the power supply;
- if you open the lid or
- if you move the POWER ON selector.

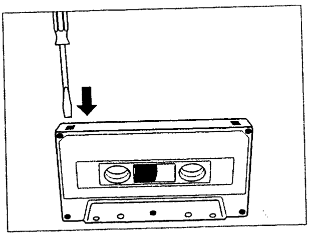
CASSETTE RECORDER

General information on recording

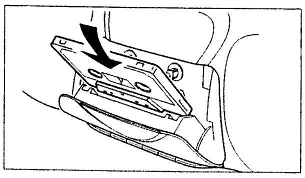
- Recording is permissible insofar as copyright or other rights of third parties are not infringed.
- For recording on this set you should use a cassette of the type "NORMAL" (IEC type **I**). This deck is not suited for recording on cassettes of the type "CHROME" (IEC **II**) or "METAL" (IEC **IV**).
- The recording level is set automatically. The controls VOLUME and DBB or 3 BAND GRAPHIC EQUALIZER do not affect the recording.
- At the very beginning and end of the tape, no recording will take place during the 7 seconds when the leader tape passes the recorder heads.

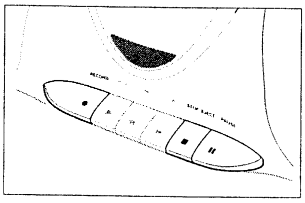
Protecting tapes from accidental erasure

- Keep the cassette side to be safeguarded in front of you and break out the left tab. Now, recording on this side is no longer possible.
- To render this safeguard ineffective, cover the aperture with a piece of adhesive tape.



CD synchro start – recording from the CD player





1 Set the POWER ON selector to CD.

2 Insert a CD and if desired, program track numbers.

3 Press STOP·EJECT ■ to open the cassette compartment.

4 Insert a blank cassette with the open side downwards.

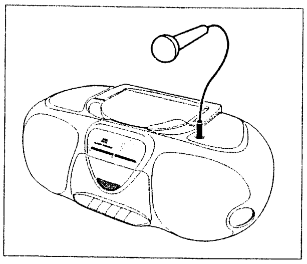
5 Press RECORD ● to start recording.
→ Playing of the CD or program starts automatically.
It is not necessary to start the CD player separately.

6 For brief interruptions, press PAUSE **II**.
To resume recording, press the key once more.

7 To stop recording, press STOP·EJECT ■.

Note: The recording can be started from different positions:
- if the CD player is in the PAUSE position, recording will start from this very position (use SEARCH ⏮ or ⏭);
- if the CD player is in the STOP position, recording will start from the beginning of the CD or program.

Recording from the radio or with the microphone



1 Set the POWER ON selector to TAPE or RADIO.
2 Prepare the sound source for recording:

RADIO: Tune to a radio station.

TAPE (microphone): Connect a microphone with a 3.5mm plug to the MIC socket. Set the VOLUME control to zero (monitoring during microphone recording is not possible).

3 Press STOP·EJECT ■ to open the cassette compartment.

4 Insert a blank cassette with the open side downwards.

5 Press RECORD ● to start recording.

6 For brief interruptions, press PAUSE **II**.
To resume recording, press the key once more.

7 To stop recording, press STOP·EJECT ■.

Note: When recording from the radio or a CD, you can connect a microphone and mix the sounds. Otherwise, be sure there is no microphone connected that could disturb your recording.

WARNINGS & SAFETY

(GB) WARNING

All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools at this potential.

(F) ATTENTION

Tous les IC et beaucoup d´autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévite pourrait être considérablement écourtée par le fait qu´aucune précaution nést prise à leur manipulation.
Lors de réparations, s´assurer de bien être relié au même potentiel que la masse de l´appareil et enfileer le bracelet serti d´une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l´on utilise soient également à ce potentiel.

ESD

(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.
Sorgen Sie dafür, daß sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.
Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(NL) WAARSCHUWING

Alle IC´s en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparationi occorre quindi essere collegato allo stesso potenziale che quello della massa delàpparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

SAFETY

(GB)

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.
Safety components are marked by the symbol ⚠

(D)

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Originalersatzteile zu verwenden.
Sicherheitsbauteile sind durch das Symbol ⚠ markiert.

(I)

Le norme di sicurezza estigono che l´apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambiago identici a quelli specificati.
Componenty di sicurezza sono marcati con ⚠

(F)

Les normes de sécurité exigent que l´appareil soit remis à l´état d´origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.
Les composants de sécurité sont marqués ⚠

(NL)

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.
De Veiligheidsonderdelen zijn aangeduid met het symbool ⚠

(S) Varning !

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

(DK) Advarsel !

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

(FIN) Varoitus !

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen !

(F)

"Pour votre sécurite, ces documents doivent être utilisés par des spécialistes agrées, seuls habilités à réparer votre appareil en panne".

DISMANTLING INSTRUCTIONS

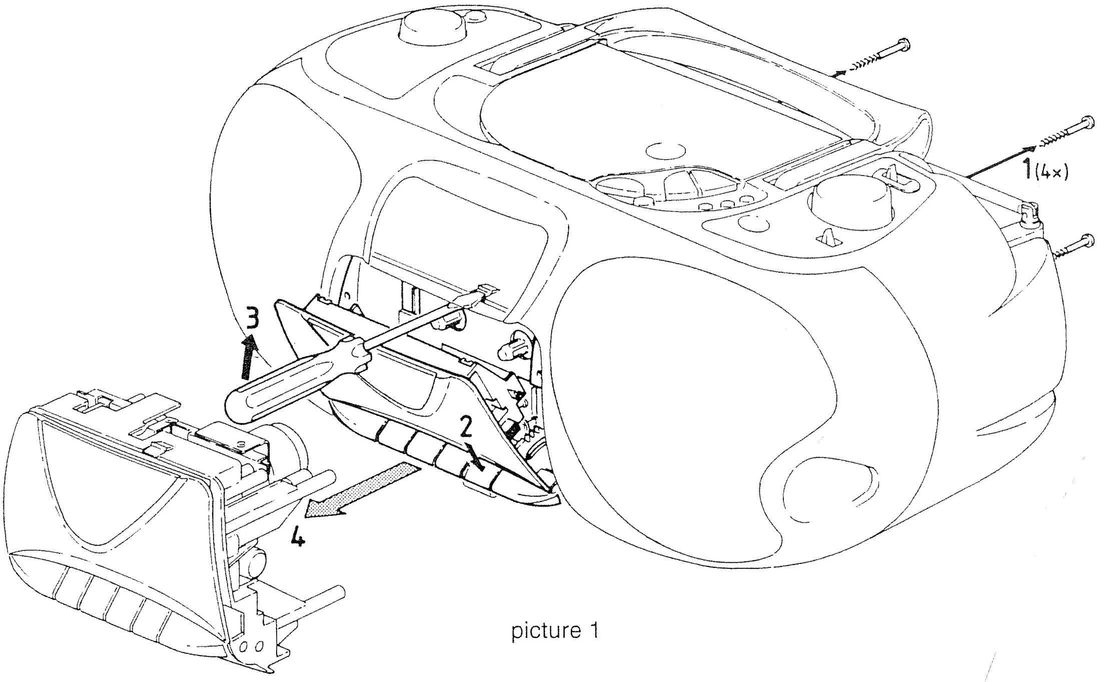
Separation of Front cabinet from Rear cabinet

- Use Torx T10 screwdriver with shaftlength 150mm e.g. 4822 395 50423
- Loosen 8 screws 3x30mm on rear side as shown in the exploded view drawing (4 pcs. inside battery compartment)
- Open CD-door and loosen screw 3x12mm inside CD-compartment.
- Move Front cabinet apart (2-3cm) until actuating lever for REC/Pb-switch overlaps Top cabinet.
- Plug head connection cable off.
- Lift Rear cabinet over the lever and separate cabinet parts as you like.

Separation of Top cabinet from Rear cabinet

- Loosen 4 screws 3x12mm + antenna screw 3x16mm on rear side and 2 screws 3x12mm on front side.
- Loosen 2 screws 3x30mm beneath carrying handle.
- Pull Top cabinet off.

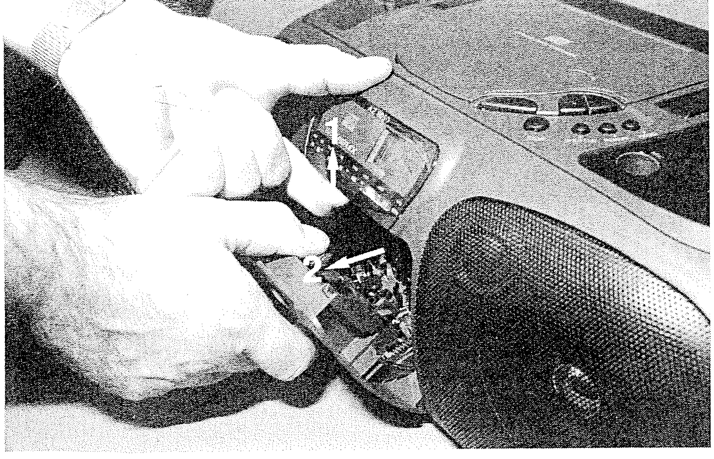
Dismantling of the Tape transport only



picture 1

- Loosen 4 screws 3x30mm inside the battery compartment.
- Open cassette door.
- Release snap hook as shown in picture 1 and pull Recorder Unit out.

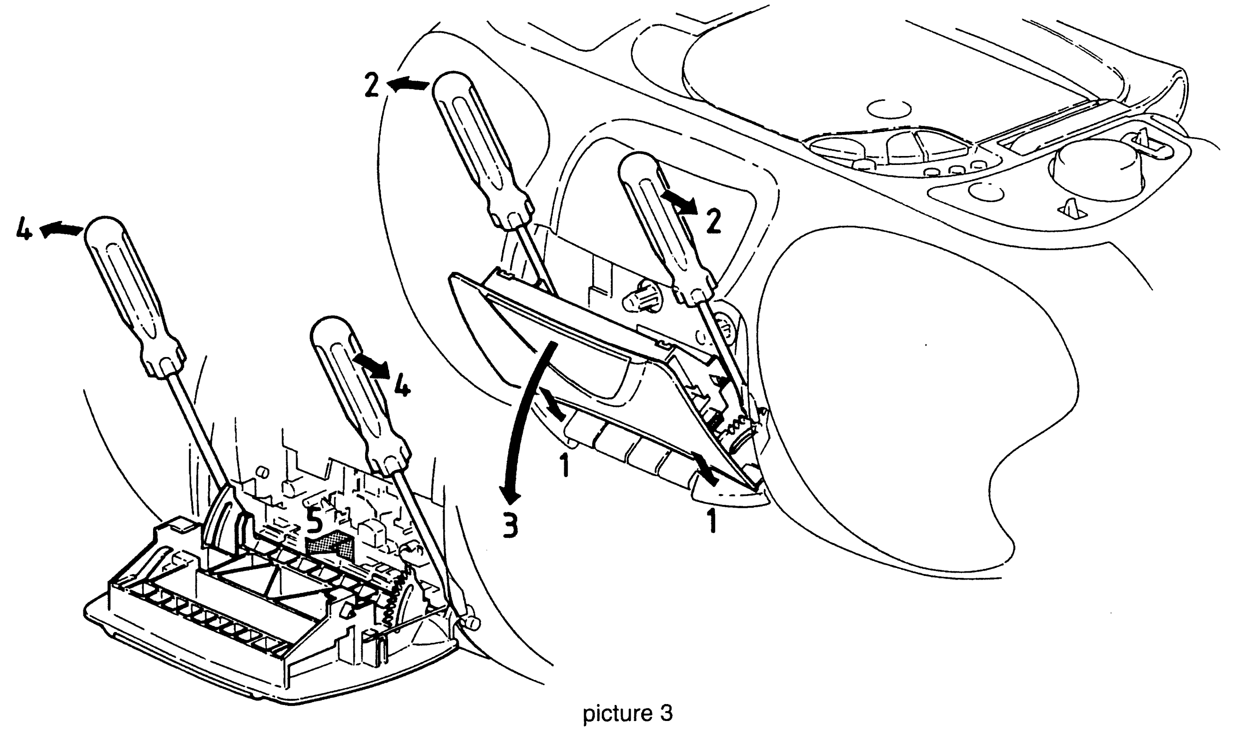
remark: to release snap hook it will also do when front cabinet is pressed upwards as shown in picture 2.



picture 2

Dismantling of the Cassette Door

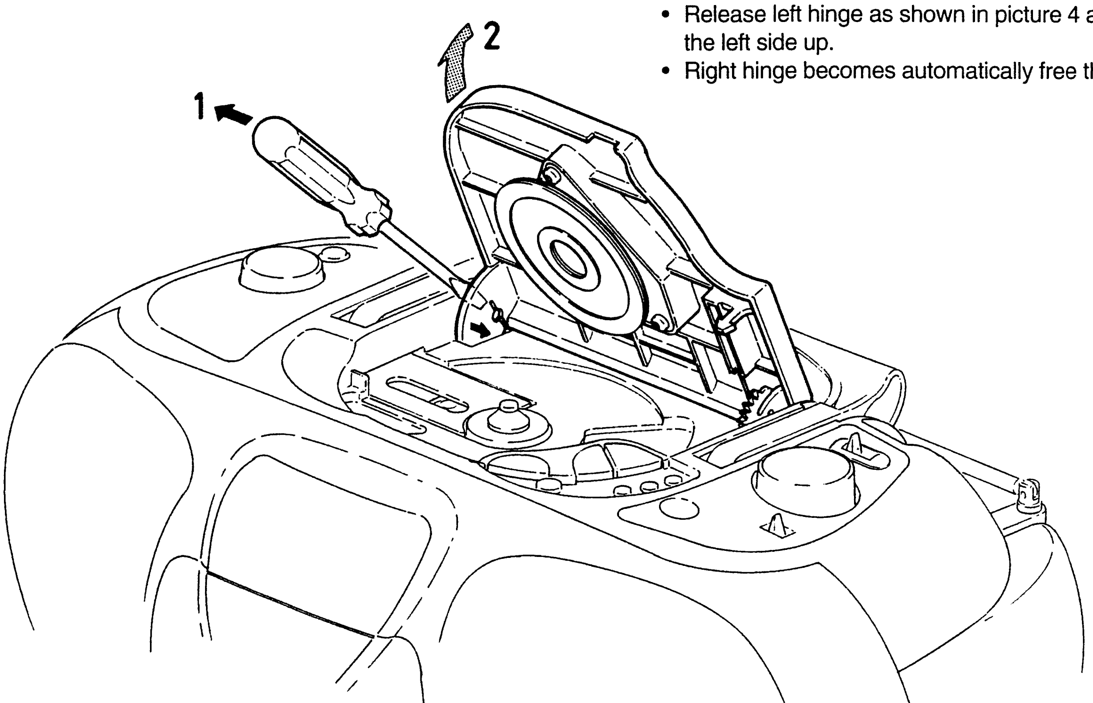
- Open cassette door and depress *REC-* and *PAUSE*-key first.
- Release catches by pressing them inwards with a screwdriver and open door as shown in picture 3.
- Release hinges by pressing them inwards with a screwdriver. Then pull door a bit upwards to get it free from *REC-* respectively *PAUSE*-key and pull door out.



picture 3

Dismantling of the CD Door

- Release left hinge as shown in picture 4 and pull door at the left side up.
- Right hinge becomes automatically free then.

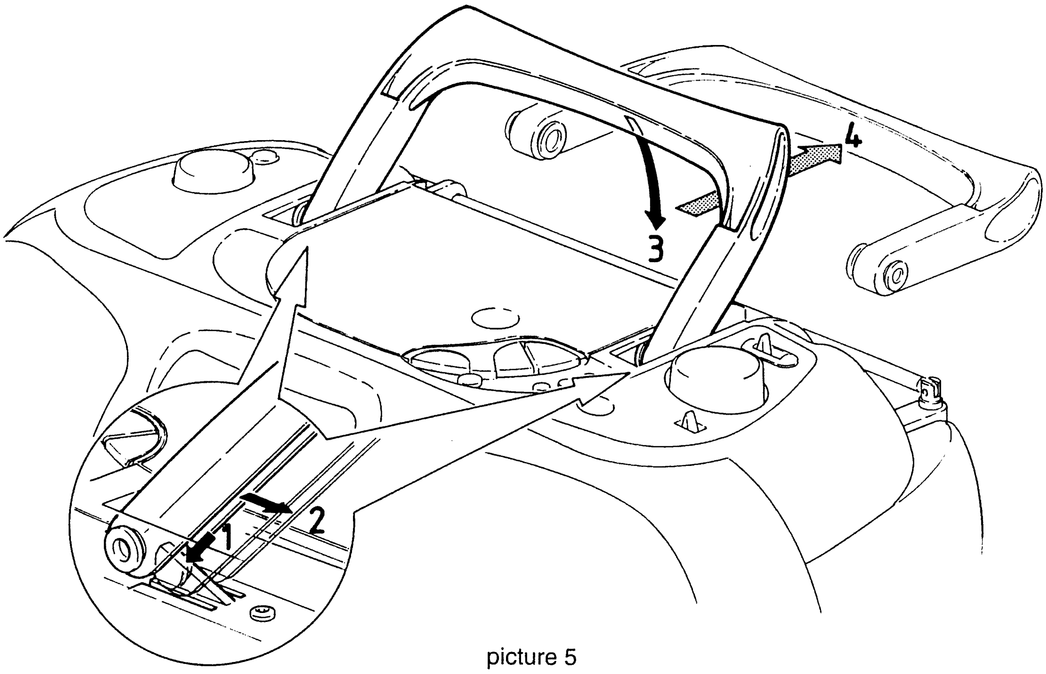


picture 4

Dismantling of the Carrying Handle

- Turn handle upright first.
- Press catch ribs a little bit downwards and pull handle backwards until catch ribs are hold in a slightly lower position.
- Now turn handle completely down ⇒ catch ribs will now automatically be bent downwards and release the handle.
- Pull handle backwards until it is free.

To mount the handle simply put it horizontally into the cabinet until it snaps in



picture 5

SERVICE HINTS

SERVICE TOOLS

TORX T10 screwdriver with shaftlength 150mm	4822 395 50423
TORX screwdriver set SBC 163	4822 295 50145
Audio signal disc SBC 429	4822 397 30184
Test disc 5 (disc without errors) + **Test disc 5A** (disc with dropout errors, black spots and fingerprints) SBC 426/426A	4822 397 30096
Burn in test disc (65 min. 1kHz signal at -30dB level without "pause")	4822 397 30155
Universal test cassette Fe SBC 420	4822 397 30071

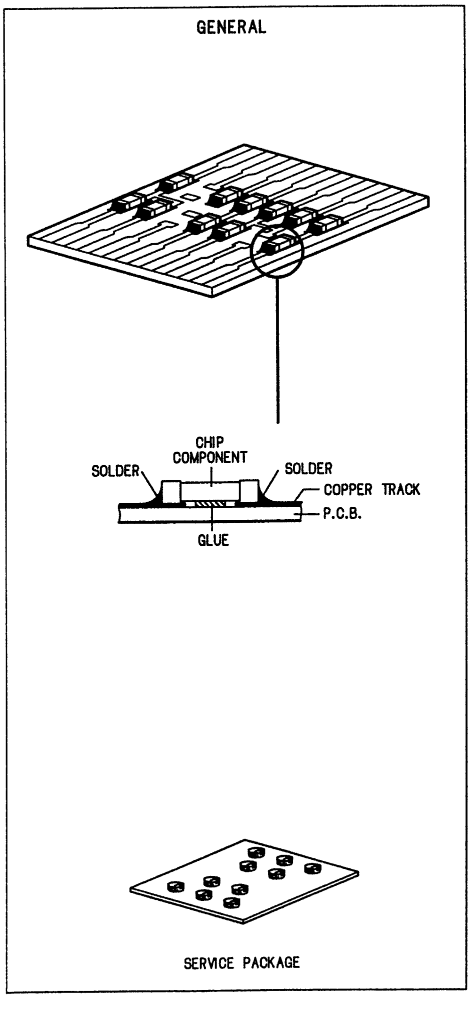
CIRCUIT DESCRIPTION

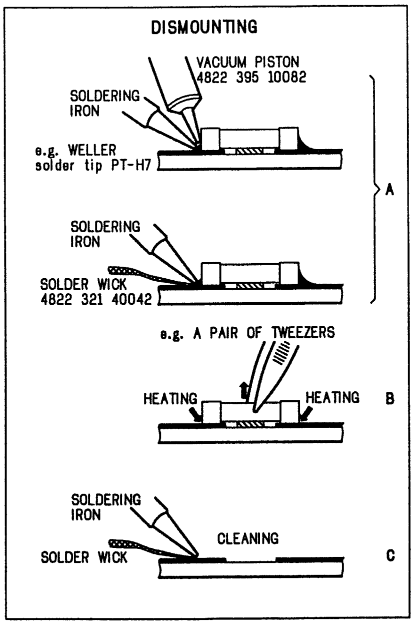
For circuit description of the CD part we refer to

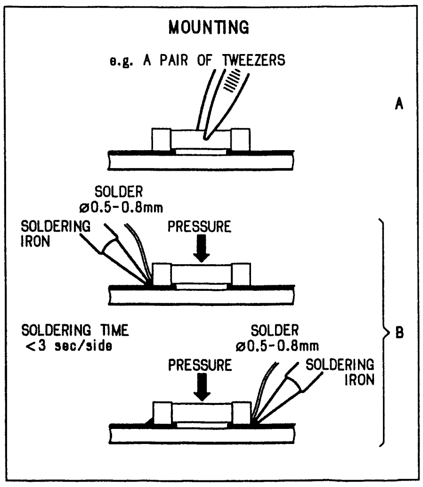
CIRCUIT DESCRIPTION ***New key components of CD 94 program*** (4822 725 25233)
chapter 3 : CD6 decoder SAA7345

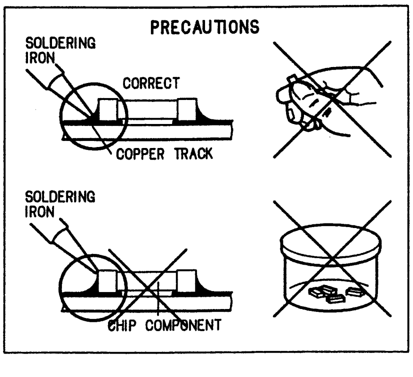
For a brief description see chapter 3 - 9 of this service manual.

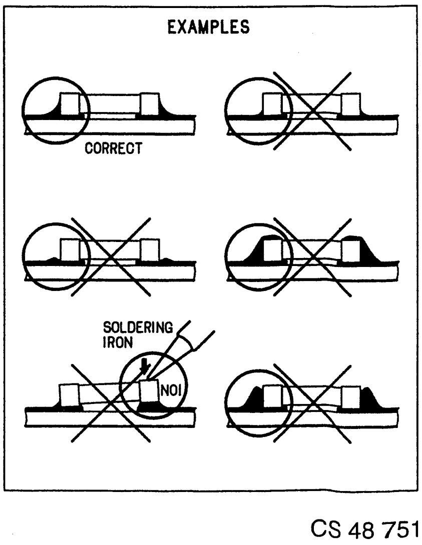
HANDLING CHIP COMPONENTS


GENERAL
CHIP COMPONENT
SOLDER
SOLDER
COPPER TRACK
P.C.B.
GLUE
SERVICE PACKAGE


DISMOUNTING
VACUUM PISTON
4822 395 10082
SOLDERING IRON
e.g. WELLER solder tip PT-H7
A
SOLDERING IRON
SOLDER WICK
4822 321 40042
e.g. A PAIR OF TWEEZERS
HEATING
HEATING
B
SOLDERING IRON
CLEANING
SOLDER WICK
C

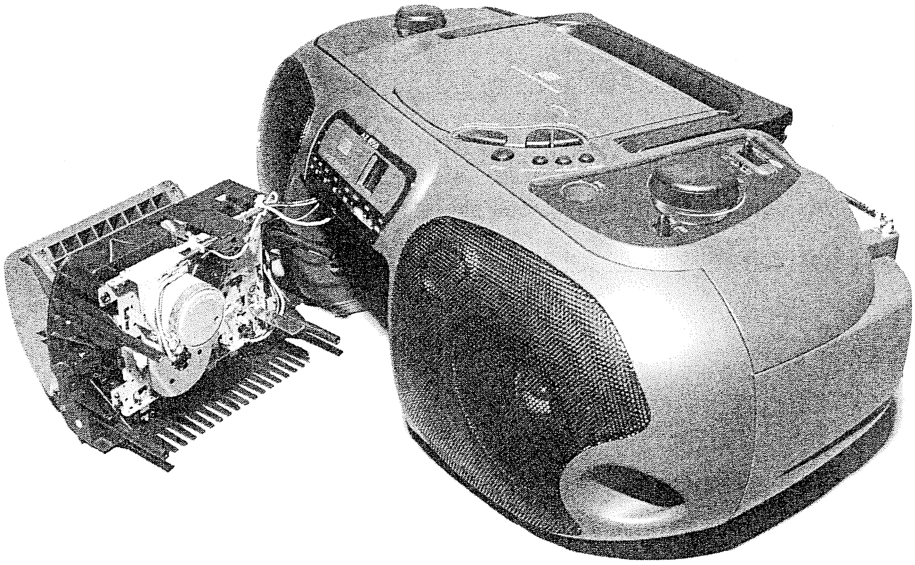

MOUNTING
e.g. A PAIR OF TWEEZERS
A
SOLDER
ø0.5-0.8mm
SOLDERING IRON
PRESSURE
SOLDERING TIME
<3 sec/side
SOLDER
ø0.5-0.8mm
PRESSURE
SOLDERING IRON
B


PRECAUTIONS
SOLDERING IRON
CORRECT
COPPER TRACK
SOLDERING IRON
CHIP COMPONENT


EXAMPLES
CORRECT
SOLDERING IRON
NO!

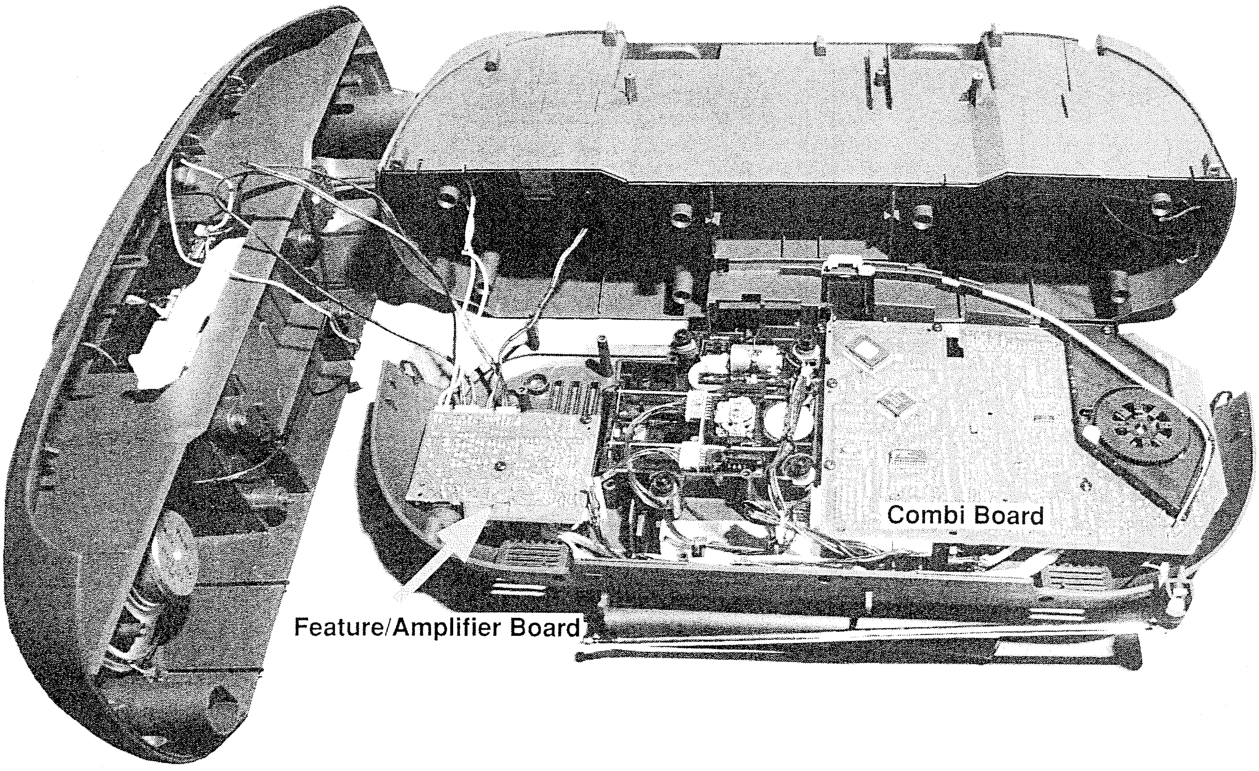
REPAIR POSITIONS

TAPE TRANSPORT



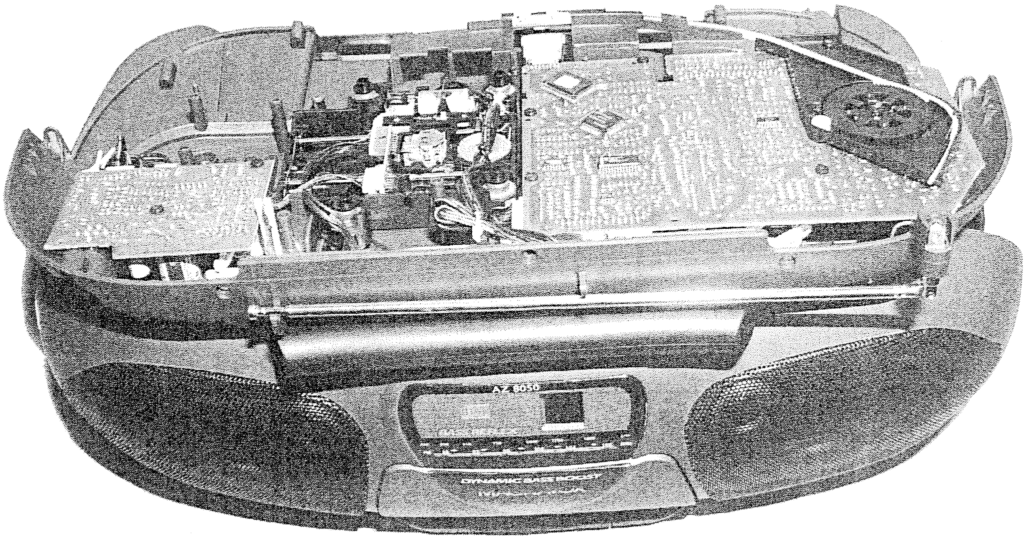
picture 6

Repairs on
Feature/Ampl.- board, Combi-board and CDdrive
(Head connection cable plugged off)

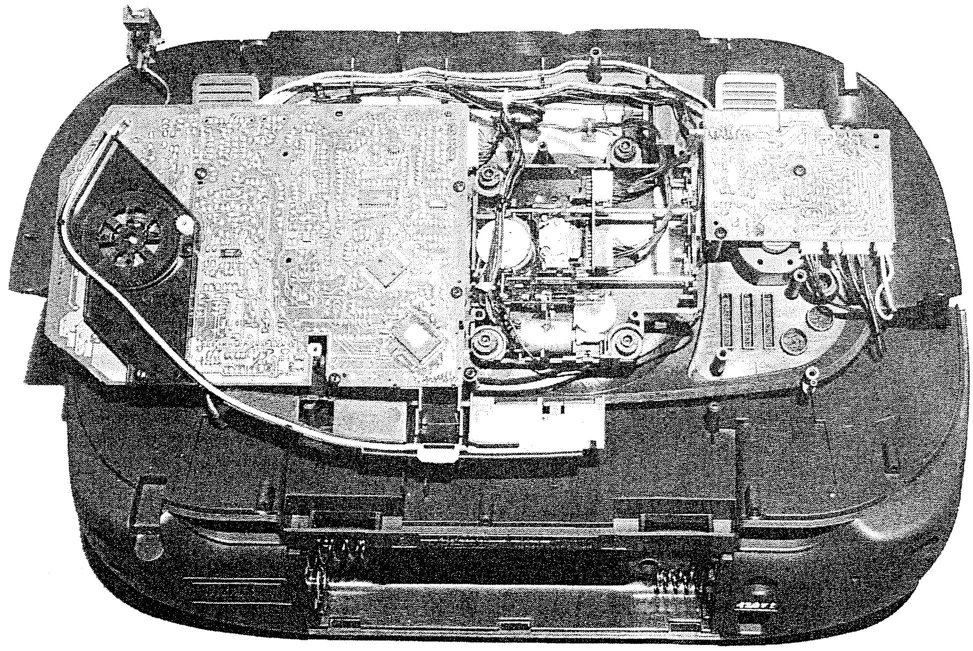

Combi Board
Feature/Amplifier Board

picture 7

Repairs on
Feature/Ampl.- board, Combi-board and CDdrive
(Head connection cable connected)



picture 8



picture 9

SERVICE TESTPROGRAM

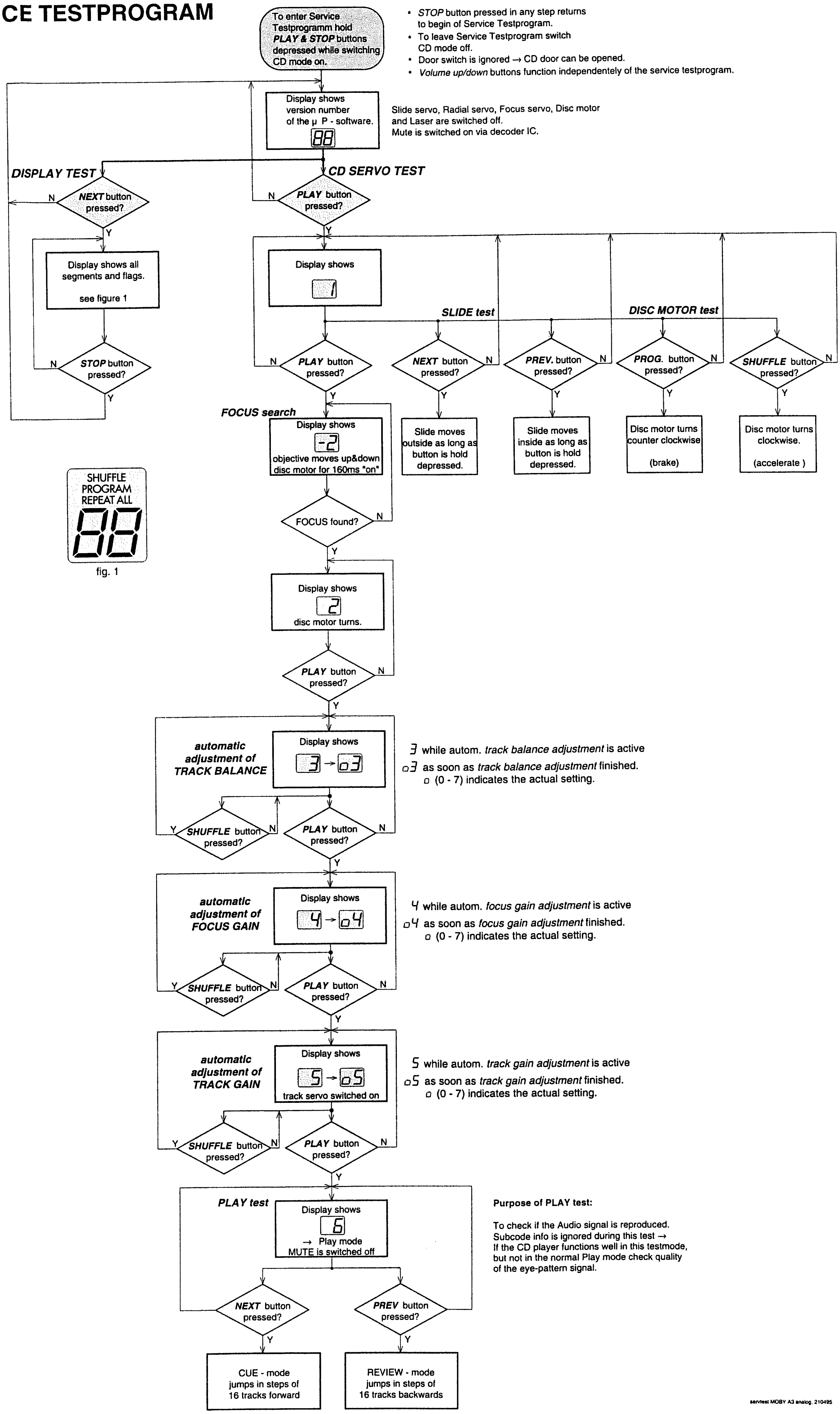

To enter Service Testprogramm hold PLAY & STOP buttons depressed while switching CD mode on.
Display shows version number of the µ P - software.
88
DISPLAY TEST
NEXT button pressed?
N
Y
Display shows all segments and flags.
see figure 1
STOP button pressed?
N
Y
CD SERVO TEST
PLAY button pressed?
N
Y
Display shows
1
SLIDE test
DISC MOTOR test
PLAY button pressed?
N
Y
NEXT button pressed?
N
Y
Slide moves outside as long as button is hold depressed.
PREV. button pressed?
N
Y
Slide moves inside as long as button is hold depressed.
PROG. button pressed?
N
Y
Disc motor turns counter clockwise
(brake)
SHUFFLE button pressed?
N
Y
Disc motor turns clockwise.
(accelerate)
FOCUS search
Display shows
-2
objective moves up&down disc motor for 160ms "on"
FOCUS found?
N
Y
Display shows
2
disc motor turns.
PLAY button pressed?
N
Y
automatic adjustment of TRACK BALANCE
Display shows
3 → o3
SHUFFLE button pressed?
Y
N
PLAY button pressed?
N
Y
automatic adjustment of FOCUS GAIN
Display shows
4 → o4
SHUFFLE button pressed?
Y
N
PLAY button pressed?
N
Y
automatic adjustment of TRACK GAIN
Display shows
5 → o5
track servo switched on
SHUFFLE button pressed?
Y
N
PLAY button pressed?
N
Y
PLAY test
Display shows
6
→ Play mode
MUTE is switched off
NEXT button pressed?
Y
PREV button pressed?
Y
CUE - mode jumps in steps of 16 tracks forward
REVIEW - mode jumps in steps of 16 tracks backwards
SHUFFLE
PROGRAM
REPEAT ALL
88

fig. 1

- *STOP* button pressed in any step returns to begin of Service Testprogram.
- To leave Service Testprogram switch CD mode off.
- Door switch is ignored → CD door can be opened.
- *Volume up/down* buttons function independentely of the service testprogram.

Slide servo, Radial servo, Focus servo, Disc motor and Laser are switched off.
Mute is switched on via decoder IC.

3 while autom. *track balance adjustment* is active
o3 as soon as *track balance adjustment* finished.
o (0 - 7) indicates the actual setting.

4 while autom. *focus gain adjustment* is active
o4 as soon as *focus gain adjustment* finished.
o (0 - 7) indicates the actual setting.

5 while autom. *track gain adjustment* is active
o5 as soon as *track gain adjustment* finished.
o (0 - 7) indicates the actual setting.

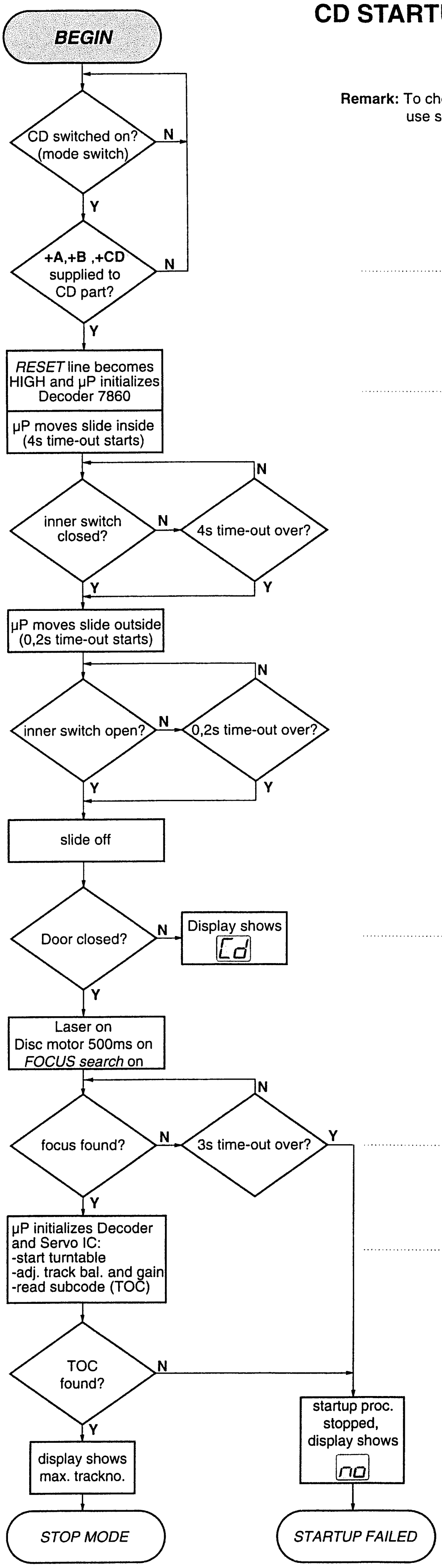
Purpose of PLAY test:

To check if the Audio signal is reproduced.
Subcode info is ignored during this test →
If the CD player functions well in this testmode, but not in the normal Play mode check quality of the eye-pattern signal.

servtest MOBY A3 analog, 210495

CD STARTUP - PROCEDURE

Remark: To check focus servo, slide servo, track servo and turntable use service test program


BEGIN
CD switched on? (mode switch)
N
Y
+A,+B ,+CD supplied to CD part?
N
Y
RESET line becomes HIGH and µP initializes Decoder 7860
µP moves slide inside (4s time-out starts)
N
inner switch closed?
N
4s time-out over?
Y
Y
µP moves slide outside (0,2s time-out starts)
N
inner switch open?
N
0,2s time-out over?
Y
Y
slide off
Door closed?
N
Display shows Cd
Y
Laser on
Disc motor 500ms on
FOCUS search on
N
focus found?
N
3s time-out over?
Y
Y
µP initializes Decoder and Servo IC:
-start turntable
-adj. track bal. and gain
-read subcode (TOC)
TOC found?
N
Y
display shows max. trackno.
startup proc. stopped, display shows no
STOP MODE
STARTUP FAILED

- Battery empty?
- check **+A, +B, +CD** and **+µP**

check: - time constant of reset circuit
- Pin 17,18 of µP 7800 HIGH ?
- Pin 28 of decoder 7860 HIGH?
- Pin 10 of µP 7800 if 4,19 MHz.

check: - door switch

check: - Laser light on ? - Check pin 2 of 7850 and *LASER CONTROL* circuit
- Focus Servo

check: - Motor control pin 22 of Decoder 7860 and Disc Motor driver 7805
- HF Signal

Abbreviations and Pin-descriptions of CD ICs

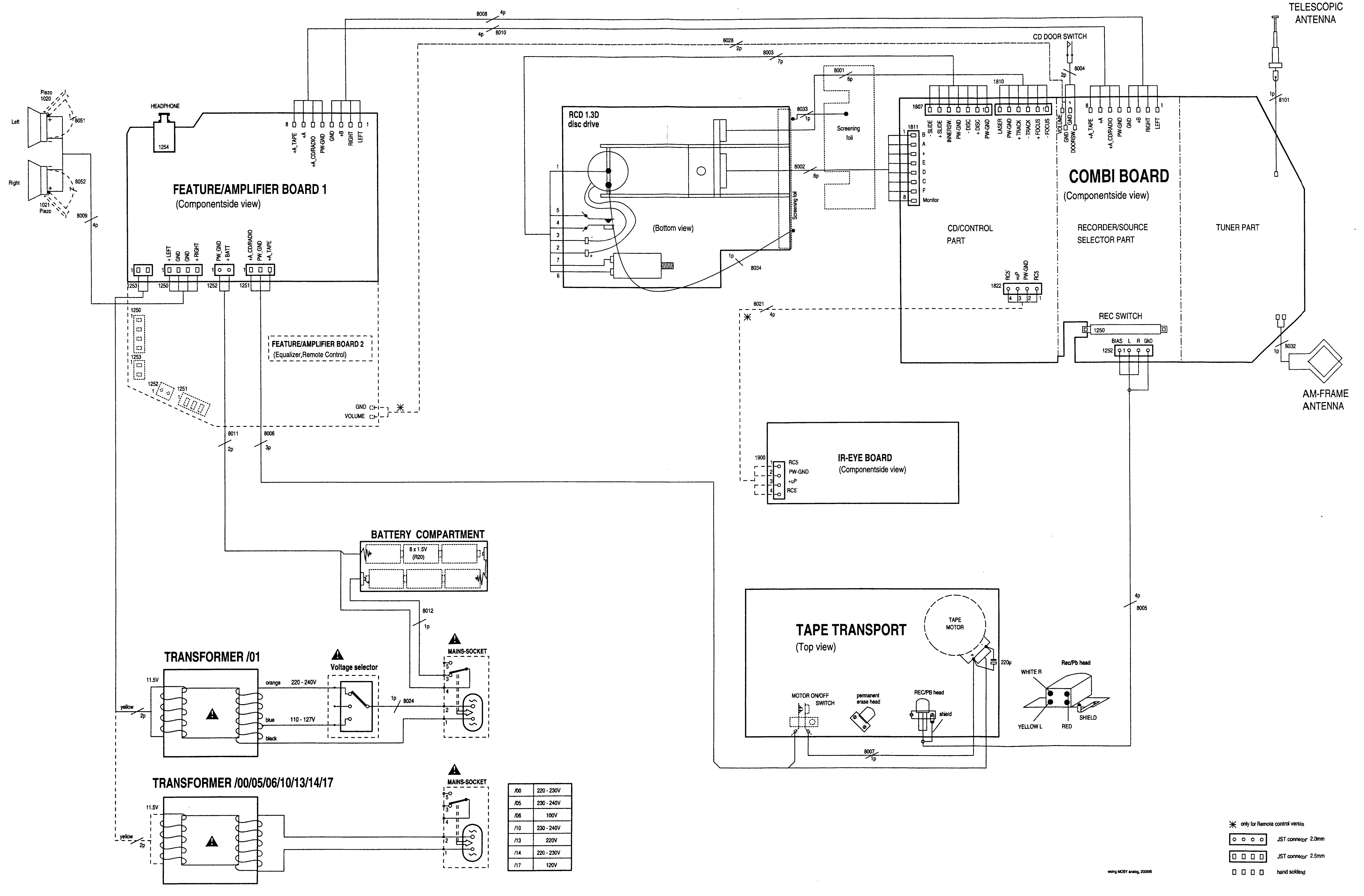
SERVO PROCESSOR M62475FP

Pin	*Name*	*Direction*	*Description*
1-3	A, B, C	Diode array -> Servo processor	Current input (central photo diode signal input)
4-5	E, F	Diode array -> Servo processor	Current input (satellite photo diode signal input)
6	SGT	Servo processor -> Track servo	Signal generator output to track servo, sends 1700Hz for adjustment procedure
7	TE -	-	Inverting input of trackerror amplifier
8	TEGain	-	Gain control pin of track error amplifier
9	TG1	-	Track Gain 1 - switch: controls the gain of the track servo amplifier
10	TE out	-	Track Error amplifier output
11	TC/Shock	-	Track Cross/Shock detector input
12	TS +	-	Non inverting input of track servo amplifier
13	TG2	not connected	Track Gain 2 - switch: controls the gain of the track servo amplifier
14	TS -	-	Inverting input of track servo amplifier
15	TS out	Servo processor -> Servo driver	Output of track servo amplifier
16	SS +	-	Non inverting input of slide servo amplifier
17	SS -	-	Inverting input of slide servo amplifier
18	Slide out	Servo processor -> Motor driver	Output of slide servo amplifier
19	DETFIL	-	Pin for connection of DETection FILter capacitor of *ADJUST LOGIC*
20	BIAS	Servo processor -> external electronic	Reference Voltage output Vcc/2 of internal BIAS-generator
21	GND	-	Ground connection pin (negative supply)
22	MLA/DIS	µP -> Servo processor	Serial interface Microprocessor LAtch control / DIScharge control for adjustment
23	JP1/SG	µP -> Servo processor	Serial interface Jump control line / Signal Generator input line for adjustment
24	MCK	µP -> Servo processor	Serial interface Clock input line
25	MSD	µP -> Servo processor	Serial interface Data input line
26	Dout	Servo processor -> µP	Serial interface Data output line
27	CLPF	-	Pin for connection of Low Pass Filter capacitor for *ADJUST LOGIC*
28	IREF	-	Reference current input
29	VCC	-	Positive supply connection pin (4V - 5.5V)
30	FSout	Servo processor -> Servo driver	Output of focus servo amplifier
31	FS -	-	Inverting input of focus servo amplifier
32	FEGain	-	Gain control pin of focus error amplifier
33	FE -	-	Inverting input of focus error amplifier
34	SGF	Servo processor -> Focus servo	Signal generator output to focus servo, sends 1300Hz for adjust. procedure
35	CFSR	-	Charge capacitor for Focus Search triangle-generator
36	APC +	-	Non inverting input of Automatic laser Power Control amplifier
37	APC -	-	Inverting input of Automatic laser Power Control amplifier
38	APC out	Servo processor -> Laser driver	Output of Automatic laser Power Control amplifier
39	MRC	-	Connection pin for capacitor of Mirror detector
40	HF	Servo processor -> Decoder	Output of HF amplifier
41	HFI	-	Inverting input of HF amplifier
42	ABC	-	Sum output of amplified A, B and C input (central photo diode signal input) to external ac-coupling capacitor

SIGNAL PROCESSOR SAA7345GP/M5

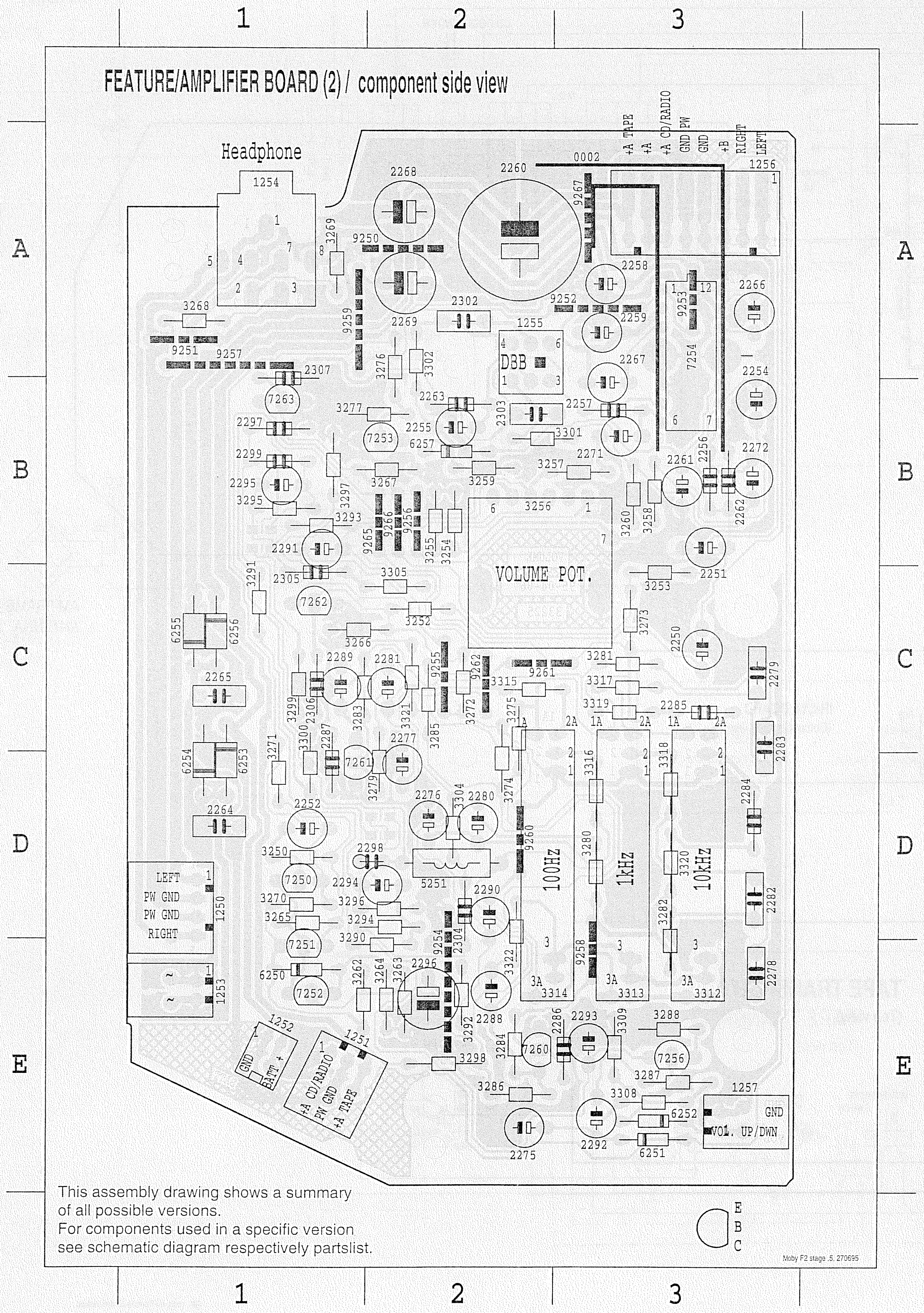
Pin	*Name*	*Direction*	*Description*
1	CL11	not connected	11.2896MHz clock output (3-state)
2	DOBM	signal processor -> Digital out (n.c.)	digital bi-phase mark output (3-state)
3	V1	not connected	versatile input pin of signal processor
4	V2	not connected	versatile input pin of signal processor
5	Test2	GND	test input of signal processor
6	Test1	GND	test input of signal processor
7	ISLICE	signal processor -> signal processor	current feedback from internal data slicer
8	HFIN	HF Pre-amp -> signal processor	comparator signal input
9	HFREF	HF Pre-amp -> signal processor	comparator signal input
10	IREF	-> signal processor	reference current pin (nom. VDD/2)
11	VDDA	-	+ supply (analog) of signal processor
12	VSSA	-	- supply (analog) of signal processor
13	CRIN	X-tal -> signal processor	crystal/resonator input of signal processor
14	CROUT	signal processor -> X-Tal	crystal/resonator output of signal processor
15	VDD1	-	+ supply for I/O-buffers of signal processor
16	VSS1	-	- supply for I/O-buffers of signal processor
17	CL16	signal processor -> DSIC2	16.9344MHz clock output of signal processor
18	MISC	not connected	general purpose DAC output (3-state)
19	DATA	signal processor -> DAC	serial data output of signal processor (3-state)
20	WCLK	signal processor -> DAC	word clock output of signal processor (3-state)
21	SCLK	signal processor -> DAC	serial bit clock output of signal processor (3-state)
22	MOTOR1	signal processor -> Disc motor driver	motor output1 of signal processor; versatile (3-state)
23	MOTOR2	not connected	motor output 2 of signal processor; versatile (3-state)
24	V5	not connected	versatile output pin of signal processor
25	V4	not connected	versatile output pin of signal processor
26	V3	not connected	versatile output pin of signal processor (open drain)
27	KILL	not connected	Mute output; programmable (open drain)
28	PORE	µP -> signal processor	power-on reset enable input (active low)
29	CLA	signal processor -> µP	4.2336MHz microprocessor clock output
30	DA	µP <-> signal processor	interface data I/O-line
31	CL	µP -> signal processor	interface clock input line
32	RAB	µP -> signal processor	interface R/W and acknowledge input
33	CFLG	not connected	correction flag output (open drain)
34-42	not used	-	
43	VSS2	-	Positive supply for internal logic of signal processor
44	VDD2	GND	Negative supply for internal logic of signal processor

WIRING DIAGRAM


TELESCOPIC ANTENNA
CD DOOR SWITCH
FEATURE/AMPLIFIER BOARD 1
(Componentside view)
HEADPHONE
1254
Piezo 1020
Piezo 1021
Left
Right
8051
8052
8009
4p
8008
8010
8028
2p
8003
7p
8001
6p
8004
1810
1807
1811
RCD 1.3D disc drive
(Bottom view)
Screening foil
8033
1p
8002
8p
8034
COMBI BOARD
(Componentside view)
CD/CONTROL PART
RECORDER/SOURCE SELECTOR PART
TUNER PART
Monitor
- SLIDE
+ SLIDE
INNERSW.
PW-GND
- DISC
+ DISC
LASER
+ TRACK
- TRACK
+ FOCUS
- FOCUS
VOLUME
GND
DOORSW.
+A_TAPE
+A
+A_CD/RADIO
GND
+B
RIGHT
LEFT
+LEFT
+RIGHT
+BATT
8101
8032
1822
RC5
+uP
REC SWITCH
1250
1252
BIAS
L
R
AM-FRAME ANTENNA
1253
1251
FEATURE/AMPLIFIER BOARD 2
(Equalizer,Remote Control)
VOLUME
8021
8011
8006
3p
IR-EYE BOARD
(Componentside view)
1900
RC5'
BATTERY COMPARTMENT
6 x 1.5V (R20)
8012
1p
TAPE TRANSPORT
(Top view)
TAPE MOTOR
220µ
MOTOR ON/OFF SWITCH
permanent erase head
REC/PB head
shield
Rec/Pb head
WHITE R
YELLOW L
RED
SHIELD
8005
8007
TRANSFORMER /01
11.5V
yellow
orange
220 - 240V
blue
110 - 127V
black
Voltage selector
8024
MAINS-SOCKET
TRANSFORMER /00/05/06/10/13/14/17
✳ only for Remote control version
○ ○ ○ ○ JST connector 2.0mm
□ □ □ □ JST connector 2.5mm
□ □ □ □ hand soldered
wiring MOBY analog, 200695

/00	220 - 230V
/05	230 - 240V
/06	100V
/10	230 - 240V
/13	220V
/14	220 - 230V
/17	120V

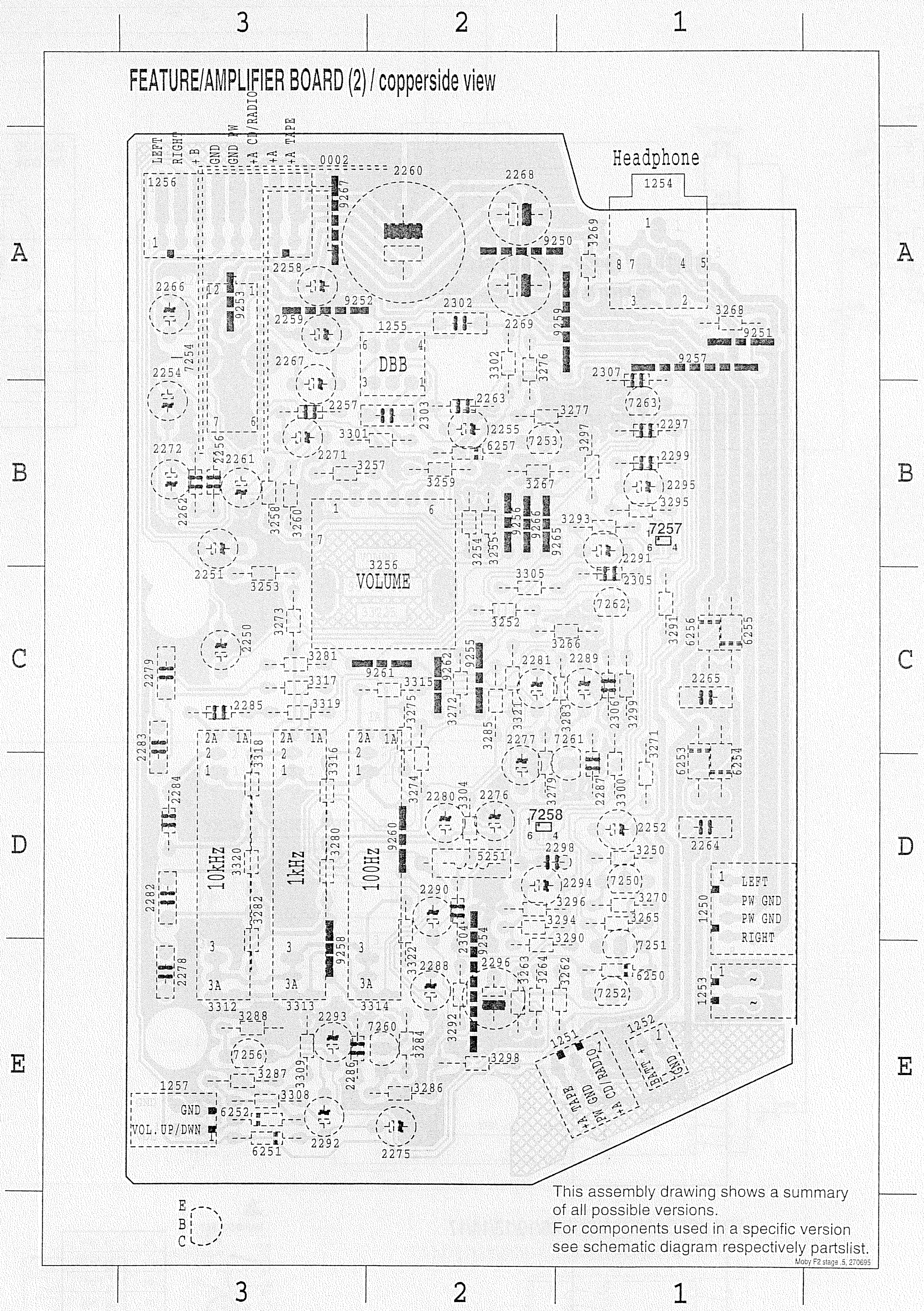
FEATURE/AMPLIFIER BOARD (2) / component side view


1
2
3
A
B
C
D
E
Headphone
1254
0002
+A TAPE
+A
+A CD/RADIO
GND PW
GND
+B
RIGHT
LEFT
1256
DBB
VOLUME POT.
100Hz
1kHz
10kHz
LEFT
PW GND
PW GND
RIGHT
1250
1253
1252
GND
BATT +
1251
+A CD/RADIO
PW GND
+A TAPE
1257
GND
VOL. UP/DWN
Moby F2 stage .5. 270695

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

1250	D	1	3259	B	2	7253	B	2
1251	E	1	3260	B	3	7254	A	3
1252	E	1	3262	E	1	7256	E	3
1253	E	1	3263	E	2	7260	E	2
1254	A	1	3264	E	2	7261	D	1
1255	A	2	3265	D	1	7262	C	1
1256	A	3	3266	C	1	7263	B	1
1257	E	3	3267	B	2	9250	A	2
2250	C	3	3268	A	1	9251	A	1
2251	B	3	3269	A	1	9252	A	3
2252	D	1	3270	D	1	9253	A	3
2254	B	3	3271	D	1	9254	E	2
2255	B	2	3272	C	2	9255	C	2
2256	B	3	3273	C	3	9256	B	2
2257	B	3	3274	D	2	9257	A	1
2258	A	3	3275	C	2	9258	E	3
2259	A	3	3276	A	2	9259	A	1
2260	A	2	3277	B	2	9260	D	2
2261	B	3	3279	D	2	9261	C	2
2262	B	3	3280	D	3	9262	C	2
2263	B	2	3281	C	3	9265	B	2
2264	D	1	3282	E	3	9266	B	2
2265	C	1	3283	C	1	9267	A	3
2266	A	3	3284	E	2	c001	A	3
2267	B	3	3285	C	2			
2268	A	2	3286	E	2			
2269	A	2	3287	E	3			
2271	B	3	3288	E	3			
2272	B	3	3290	E	2			
2275	E	2	3291	C	1			
2276	D	2	3292	E	2			
2277	D	2	3293	B	1			
2278	E	3	3294	D	2			
2279	C	3	3295	B	1			
2280	D	2	3296	D	2			
2281	C	2	3297	B	1			
2282	D	3	3298	E	2			
2283	C	3	3299	C	1			
2284	D	3	3300	D	1			
2285	C	3	3301	B	2			
2286	E	3	3302	A	2			
2287	D	1	3304	D	2			
2288	E	2	3305	C	2			
2289	C	1	3308	E	3			
2290	D	2	3309	E	3			
2291	B	1	3312	D	3			
2292	E	3	3313	D	3			
2293	E	3	3314	D	2			
2294	D	2	3315	C	2			
2295	B	1	3316	D	3			
2296	E	2	3317	C	3			
2297	B	1	3318	D	3			
2298	D	2	3319	C	3			
2299	B	1	3320	D	3			
2302	A	2	3321	C	2			
2303	B	2	3322	D	2			
2304	D	2	5251	D	2			
2305	C	1	6250	E	1			
2306	C	1	6251	E	3			
2307	B	1	6252	E	3			
3250	D	1	6253	D	1			
3252	C	2	6254	D	1			
3253	C	3	6255	C	1			
3254	B	2	6256	C	1			
3255	B	2	6257	B	2			
3256	B	2	7250	D	1			
3257	B	3	7251	E	1			
3258	B	3	7252	E	1			

FEATURE/AMPLIFIER BOARD (2) / copperside view


3
2
1
A
B
C
D
E
Headphone
1254
LEFT
RIGHT
+B
GND
GND PW
+A CD/RADIO
+A
+A TAPE
0002
1256
DBB
VOLUME
10kHz
1kHz
100Hz
7257
7258
LEFT
PW GND
PW GND
RIGHT
1250
1253
1257
GND
VOL. UP/DWN
1251
+A TAPE
PW GND
+A CD/RADIO
1252
BATT +
GND
Moby F2 stage .5. 270695

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

7257	B	1
7258	D	2

1250 H22
1251 N 4
1252 M 4
1253 L 4
1254 F22
1255 I18

1256 B 1
1257 A 1
2250 C 5
2251 F 5
2252 F 2
2253 L 5

2254 F17
2255 G17
2256 F18
2257 G18
2258 E20
2259 G20

2260 E19
2261 F18
2262 F17
2263 G18
2264 L 5
2265 L 5

2266 E20
2267 G20
2268 F20
2269 G20
2271 F17
2272 F17

2273 F 6
2274 B6
2275 B12
2276 C 8
2277 F 8
2278 C 8

2279 G 8
2280 C 9
2281 F 9
2282 C 9
2283 G 9
2284 D 8

2285 G 8
2286 C10
2287 G10
2288 D11
2289 G11
2290 C12

2291 G12
2292 B13
2293 G13
2294 C14
2295 G14
2296 G 4

2297 F15
2298 F15
2299 B15
2300 B15
2302 I19
2303 H19

2304 D14
2305 H14
2306 C 5
2307 F 5
3250 F 3
3252 C 5

3253 F 5
3256 K15
3256 I15
3257 F17
3258 F17
3259 G17

3260 F17
3261 H 2
3262 G 2
3263 H 2
3264 H 4
3265 F 3

3266 C 6
3267 F 6
3268 F21
3269 F21
3270 F 2
3271 F 3

3272 B 6
3273 F 6
3274 B 6
3275 E 6
3276 E17
3277 E17

3279 F 9
3280 C 9
3281 G 9
3282 C 9
3283 F10
3284 C10

3285 F10
3286 C10
3287 B12
3288 C13
3290 B14
3291 F14

3292 C14
3293 G14
3294 C14
3295 G14
3296 D14
3297 H14

3298 F 4
3299 H15
3300 D15
3301 H18
3302 I18
3304 D13

3305 H13
3306 D10
3307 G10
3308 B12
3309 C12
3310 D 8

3311 G 8
3312 D 7
3312 G 7
3313 C 8
3313 G 8
3314 C 8

3314 F 8
3315 F 8
3316 C 8
3317 G 8
3318 C 8
3319 G 9

3320 D 9
3321 H 8
3322 D 8
5250 B14
5251 F14
6250 G 4

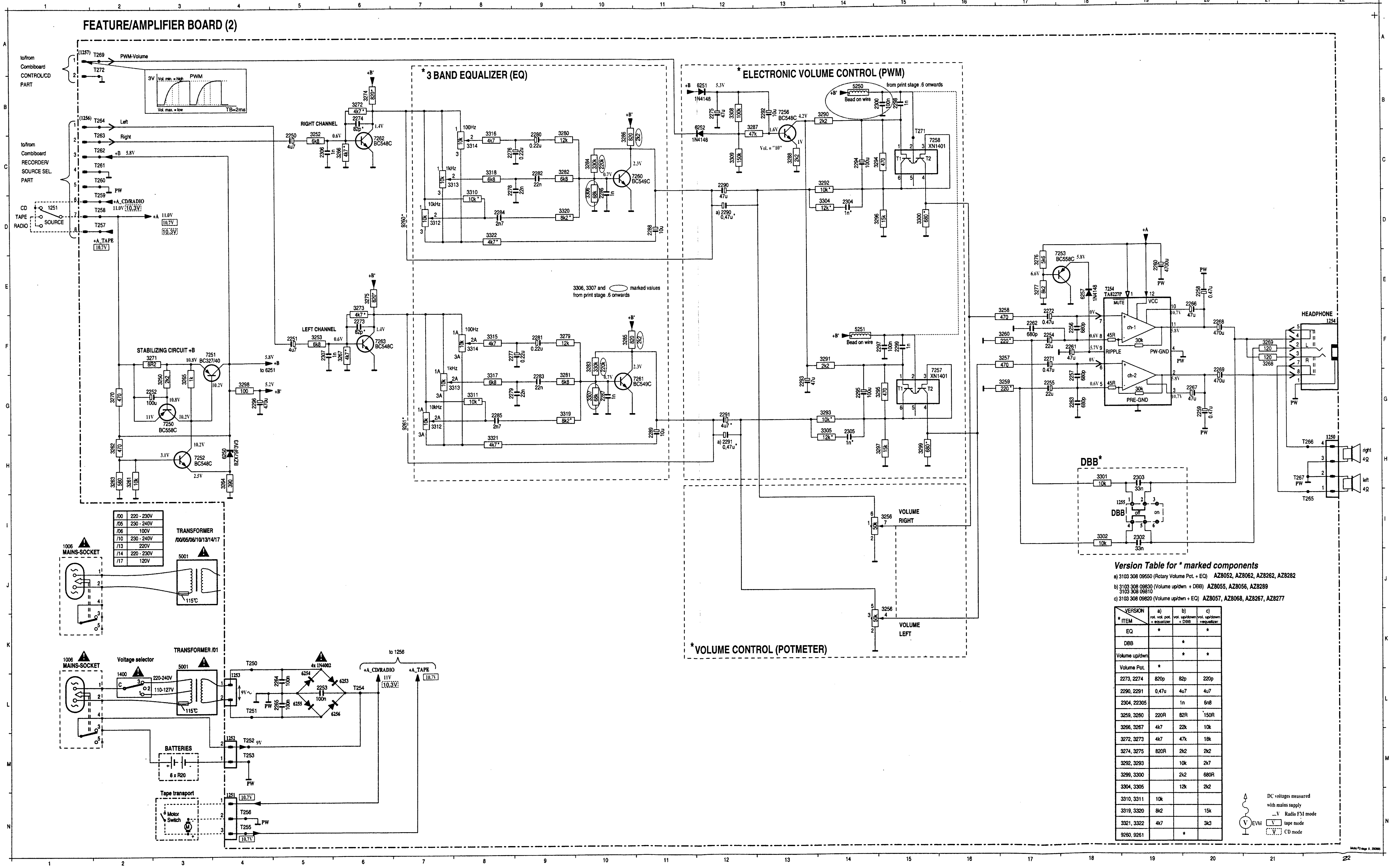
6251 B12
6252 B12
6253 L 6
6254 L 5
6255 L 5
6256 L 6

6257 E18
7250 G 3
7251 F 3
7252 G 3
7253 D18
7254 E19

7256 B13
7257 G15
7258 C15
7260 C10
7261 G10
7262 C 6

7263 F 6
9260 D 7
9261 G 7

FEATURE/AMPLIFIER BOARD (2)


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
A B C D E F G H I J K L M N
to/from Combiboard CONTROL/CD PART
(1257) T269 PWM-Volume
T272
3V Vol. min. = High PWM
Vol. max. = low TB=2ms
to/from Combiboard RECORDER/ SOURCE SEL. PART
(1256) T264 Left
T263 Right
T262 +B 5.8V
T261
T260
T259 PW
T258 +A_CD/RADIO 11.0V 10.3V
T257 +A_TAPE 10.7V
CD TAPE RADIO 1251 SOURCE
+A 11.0V 10.7V 10.3V
RIGHT CHANNEL
LEFT CHANNEL
7262 BC548C
7263 BC548C
*3 BAND EQUALIZER (EQ)
100Hz 1kHz 10kHz
7260 BC549C
7261 BC549C
3306, 3307 and marked values from print stage .6 onwards
*ELECTRONIC VOLUME CONTROL (PWM)
from print stage .6 onwards
Bead on wire
6251 1N4148
6252 1N4148
7256 BC548C
Vol. = "10"
7258 XN1401
7257 XN1401
STABILIZING CIRCUIT +B
7251 BC327/40
7250 BC558C
7252 BC548C
6250 BZX79F3V3
5.8V +B to 6251
5.2V +B'
7253 BC558C
6257 1N4148
7254 TA8227P
MUTE VCC RIPPLE PW-GND PRE-GND ch-1 ch-2
HEADPHONE 1254
1250 right 4Ω left 4Ω
T266 T267 PW T265
DBB*
1255 DBB off on
3301 10k 2303 33n
3302 10k 2302 33n
3256 VOLUME RIGHT
3256 VOLUME LEFT
*VOLUME CONTROL (POTMETER)
/00 220 - 230V
/05 230 - 240V
/06 100V
/10 230 - 240V
/13 220V
/14 220 - 230V
/17 120V
TRANSFORMER /00/05/06/10/13/14/17
1006 MAINS-SOCKET
5001 115°C
TRANSFORMER /01
Voltage selector
1400 220-240V 110-127V
T250 T251 1253 9V~
4x 1N4002
6254 6253 6255 6256
2253 100n
T254
to 1256
+A_CD/RADIO 11V 10.3V
+A_TAPE 10.7V
1252 T252 9V T253 PW
BATTERIES 6 x R20
Tape transport
Motor Switch
1251 10.7V T256 PW T255 10.7V

*Version Table for * marked components*

a) 3103 308 09550 (Rotary Volume Pot. + EQ) **AZ8052, AZ8062, AZ8262, AZ8282**

b) 3103 308 09830 (Volume up/dwn + DBB) **AZ8055, AZ8056, AZ8289**
3103 308 09810

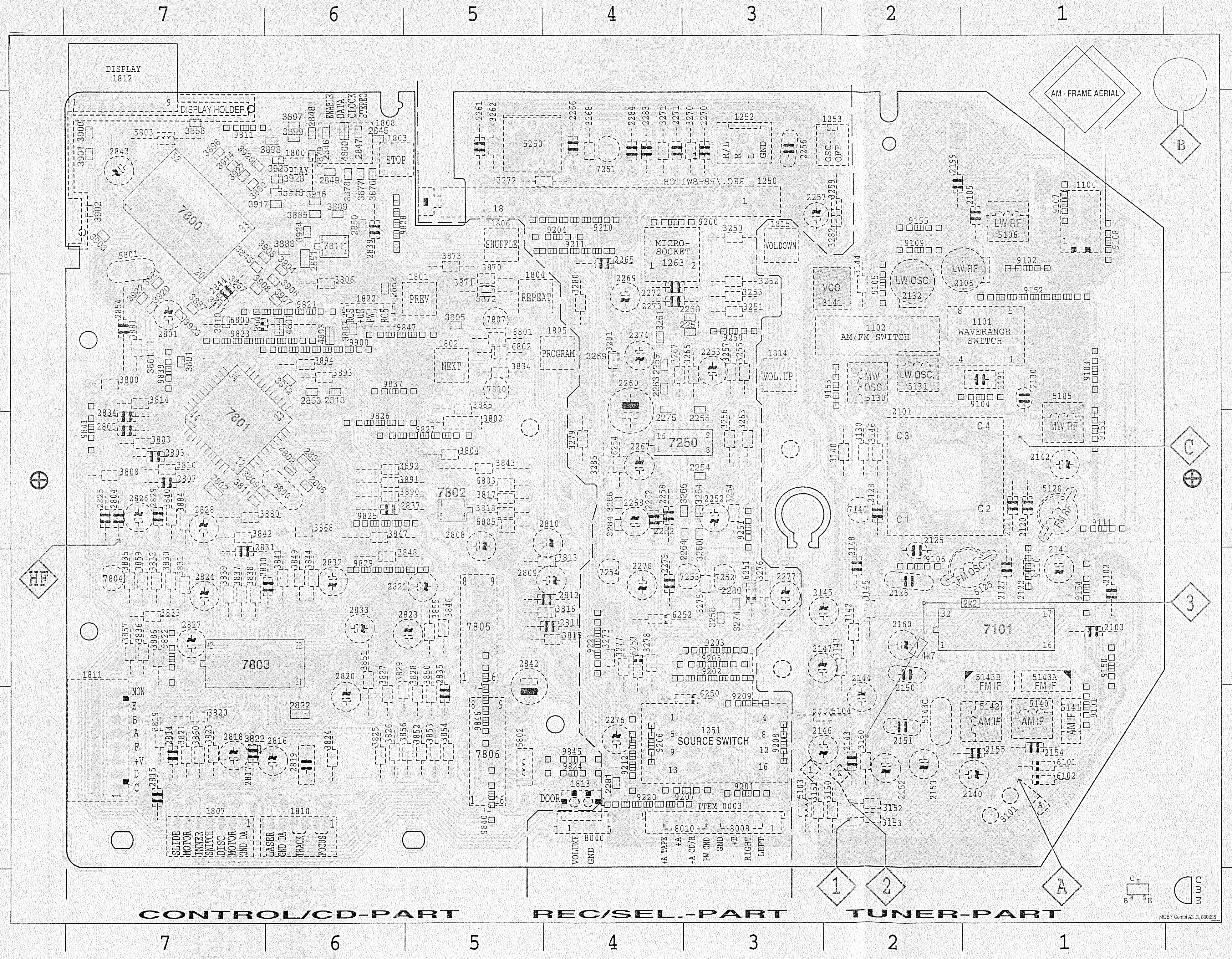
c) 3103 308 09820 (Volume up/dwn + EQ) **AZ8057, AZ8068, AZ8267, AZ8277**

VERSION / * ITEM	a) rot. vol. pot. + equalizer	b) vol. up/down + DBB	c) vol. up/down +equalizer
EQ	*		*
DBB		*	
Volume up/dwn		*	*
Volume Pot.	*		
2273, 2274	820p	82p	220p
2290, 2291	0,47u	4u7	4u7
2304, 22305		1n	6n8
3259, 3260	220R	82R	150R
3266, 3267	4k7	22k	10k
3272, 3273	4k7	47k	18k
3274, 3275	820R	2k2	2k2
3292, 3293		10k	2k7
3299, 3300		2k2	680R
3304, 3305		12k	2k2
3310, 3311	10k		
3319, 3320	8k2		15k
3321, 3322	4k7		3k3
9260, 9261		*	

DC voltages measured with mains supply
....V Radio FM mode
V tape mode
V CD mode
EVM

CS 48 756

COMBI BOARD (A3) / Copperside view


7
6
5
4
3
2
1
A
B
C
D
E
DISPLAY 1812
DISPLAY HOLDER
AM - FRAME AERIAL
7800
7801
7802
7803
7805
7806
7101
7250
SHUFFLE
MICRO-SOCKET
VOLDOWN
VOL.UP
PREV
REPEAT
NEXT
PROGRAM
STOP
PLAY
VCO
LW OSC.
LW RF
1102 AM/FM SWITCH
1101 WAVERANGE SWITCH
MW OSC.
MW RF
FM OSC
FM RF
FM IF
AM IF
1251 SOURCE SWITCH
DOOR
SLIDE MOTOR
INNER SWITCH
DISC MOTOR
GND DA
LASER
TRACK
FOCUS
VOLUME
GND
RIGHT
LEFT
HF
CONTROL/CD-PART
REC/SEL.-PART
TUNER-PART

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

TUNER PART

1101	B	1
1102	B	2
1104	A	1
2101	C	2
2102	D	1
2103	D	1
2105	A	1
2106	A	1
2120	C	1
2121	C	1
2122	D	1
2125	D	2
2126	D	2
2127	D	1
2128	C	2
2130	B	1
2131	B	1
2132	B	2
2140	E	1
2141	D	1
2142	C	1
2143	E	2
2144	E	2
2145	D	3
2146	E	3
2147	D	3
2148	D	2
2150	D	2
2151	E	2
2152	E	2
2153	E	2
2154	E	1
2155	E	1
2160	D	2
2199	A	2
3130	C	2
3140	C	2
3141	B	2
3142	D	2
3143	D	2
3144	B	2
3145	D	2
3146	C	2
3150	E	2
3151	E	3
3152	E	2
3153	E	2
3160	E	2
5103	E	3
5104	E	3
5105	C	1
5106	A	1
5120	C	1
5125	D	1
5130	B	2
5131	B	2
5140	E	1
5141	E	1
5142	E	1
5143A	D	1
5143B	D	1
5143C	E	2
6101	E	1
6102	E	1
7140	C	2
8101	E	1
9101	E	1
9102	A	1
9103	B	1
9104	B	1
9105	B	2
9106	D	2
9107	A	1
9108	A	1
9109	A	2
9110	D	1
9111	C	1
9150	D	1
9151	C	1
9152	B	1
9153	B	2
9154	D	1
9155	A	2

REC/SEL. PART

1250	A	4
1251	E	3
1252	A	3
1253	A	2
1263	A	4
2252	C	3
2253	B	3
2256	A	3
2257	A	3
2258	C	4
2260	B	4
2261	A	5
2262	C	4
2265	A	4
2266	A	4
2267	C	4
2268	C	4
2269	B	4
2270	A	3
2271	A	4
2272	B	4
2273	B	4
2274	B	4
2276	E	4
2277	D	3
2278	D	4
2279	D	4
2283	A	4
2284	A	4
3250	A	3
3251	B	3
3252	B	3
3253	B	3
3254	C	3
3255	B	3
3256	C	3
3257	B	3
3259	A	2
3262	A	5
3263	C	3
3265	B	3
3267	B	4
3268	A	4
3270	A	3
3271	A	4
3272	A	4
3273	D	4
3275	D	3
3276	D	3
3277	D	4
3278	D	4
3279	C	4
3280	B	4
3281	B	4
3282	A	2
3285	C	4
5250	A	5
6250	E	3
6251	D	3
6252	D	4
6253	D	4
6254	C	4
7251	A	4
7252	D	3
7253	D	3
7254	D	4
8008	E	3
8040	E	4
9200	B	3
9201	E	3
9204	A	4
9205	D	3
9206	E	4
9207	E	3
9208	E	3
9209	E	3
9210	A	4
9211	A	4
9212	E	4
9220	E	4
9221	D	4
9250	B	3
9251	C	3

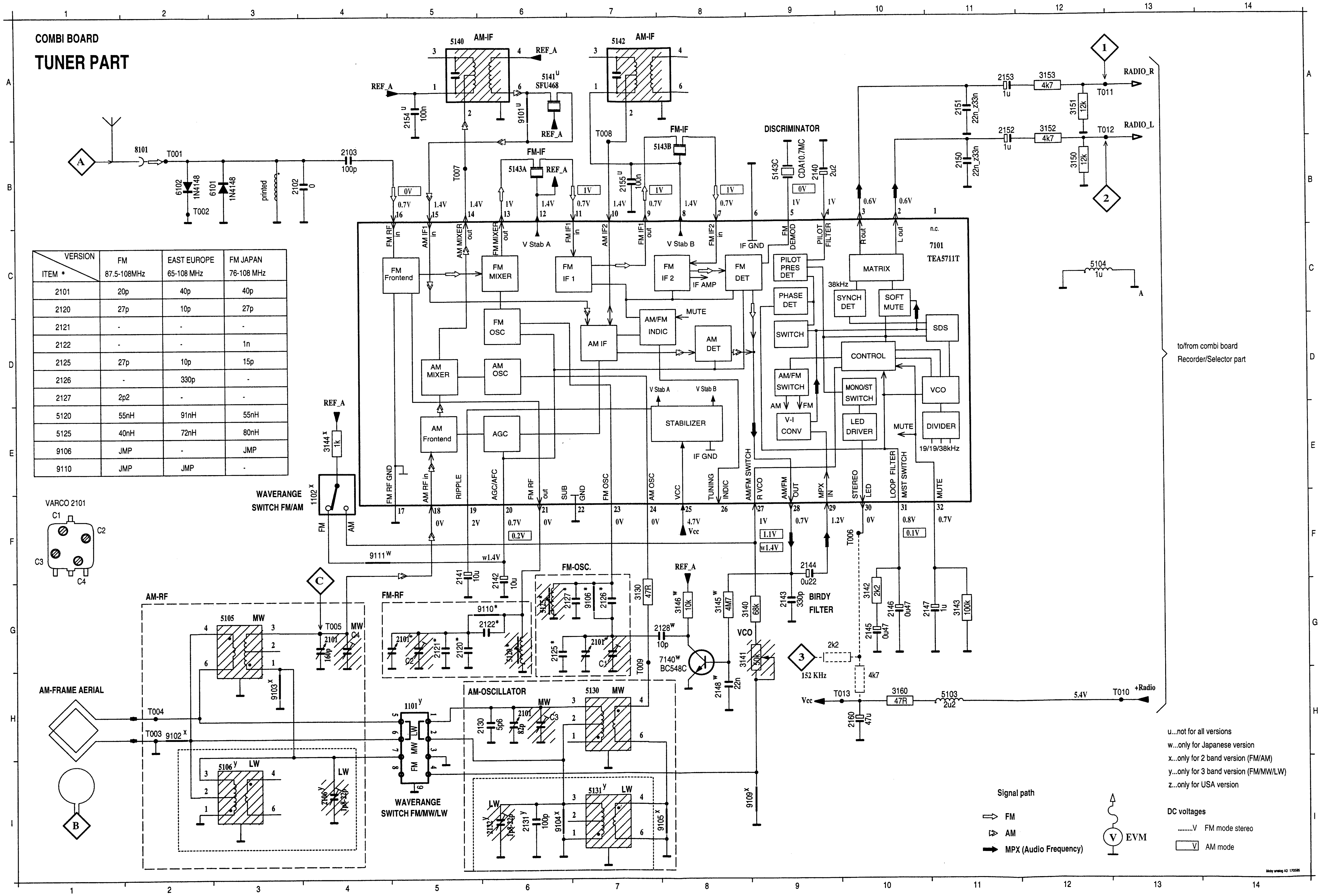
CONTROL/CD-PART

1800	A	6
1801	B	5
1802	B	5
1803	A	6
1804	B	5
1805	B	4
1806	A	5
1807	E	7
1808	A	6
1810	E	6
1811	E	7
1812	A	7
1813	E	4
1814	B	3
1815	A	3
1822	B	6
2801	B	7
2803	C	7
2804	C	7
2805	C	7
2807	C	7
2808	C	5
2809	D	4
2810	C	4
2811	D	4
2812	D	4
2814	E	7
2815	E	7
2816	E	6
2817	E	7
2818	E	7
2819	E	6
2820	E	6
2821	D	5
2823	D	5
2824	D	7
2825	C	7
2826	C	7
2827	D	7
2828	C	7
2829	C	7
2830	D	6
2831	D	7
2832	D	6
2833	D	6
2834	C	7
2835	E	5
2837	C	6
2839	A	6
2842	E	5
2843	A	7
2844	B	7
2854	B	7
3800	B	7
3802	C	5
3803	C	7
3804	C	5
3806	B	6
3808	C	7
3810	C	7
3813	D	4
3814	B	7
3815	D	4
3816	D	4
3817	C	5
3818	C	5
3819	E	7
3820	E	7
3821	E	7
3823	E	7
3824	E	6
3825	E	6
3826	E	6
3827	E	6
3828	E	5
3829	E	6
3830	D	7
3831	D	7
3832	D	7
3833	D	7
3834	B	5
3835	D	7
3836	D	7
3837	D	7
3838	D	7
3839	D	7
3840	C	7
3841	D	6
3842	C	7
3843	C	5
3844	D	6
3846	D	5
3847	C	6
3848	D	6
3849	D	6
3850	E	5
3851	D	6
3852	E	5
3853	E	5
3854	E	5
3855	D	5
3856	E	5
3857	D	7
3859	D	7
3860	E	7
3865	B	5
3868	C	6
3870	B	5
3871	B	5
3873	A	5
3880	C	7
3881	B	7
3884	C	7
3886	D	7
3890	C	6
3891	C	6
3892	C	6
3893	B	6
3894	B	6
5800	C	7
5801	A	7
5802	E	5
5803	A	7
6800	B	7
6801	B	5
6802	B	5
6803	C	5
6805	C	5
7804	D	7
7805	D	5
7806	E	5
7807	B	5
7810	B	5
9811	A	7
9821	B	6
9822	D	7
9823	B	7
9824	E	4
9825	C	6
9826	C	6
9827	C	5
9828	A	6
9829	D	6
9837	B	6
9839	B	7
9840	E	5
9841	C	7
9845	E	4
9846	E	5
9847	B	6
9900	B	6

2250	B	3
2251	B	3
2254	C	3
2255	C	3
2259	B	4
2263	B	4
2264	C	3
2275	C	4
2280	D	3
2281	E	4
2282	C	4
2802	C	7
2806	C	6
2813	B	6
2822	E	6
2836	C	6
2845	A	6
2846	A	6
2847	A	6
2848	A	6
2849	A	6
2850	A	6
2851	A	6
2852	B	6
2853	B	6
3258	D	3
3260	C	3
3261	B	4
3264	C	3
3266	C	3
3269	B	4
3274	D	3
3284	C	4
3286	C	4
3801	B	7
3805	B	5
3809	C	7
3811	C	7
3812	B	6
3822	E	7
3845	A	7
3858	A	7
3861	B	7
3867	B	7
3869	A	7
3872	B	5
3876	A	6
3877	A	6
3878	A	6
3879	A	6
3882	B	6
3885	A	6
3887	B	7
3888	A	6
3889	A	6
3896	A	7
3897	A	6
3898	A	6
3899	A	6
3900	A	7
3901	A	7
3902	A	7
3903	A	7
3904	A	6
3905	A	7
3906	B	6
3907	B	6
3908	B	7
3909	B	7
3910	B	7
3911	B	7
3914	A	7
3915	A	6
3916	A	6
3917	A	6
3920	B	7
3921	B	7
3922	B	7
3923	B	7
3924	A	6
3925	A	6
3926	A	7
3927	A	7
3928	A	6
4800	A	6
4801	B	6
4802	C	6
4803	B	6
7101	D	1
7250	C	4
7800	A	7
7801	C	7
7802	C	5
7803	D	7
7811	A	6

COMBI BOARD

TUNER PART


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
AM-IF
5140
REF_A
5141 u
SFU468
9101 u
2154 u 100n
5142
AM-IF
T008
FM-IF
5143B
5143A
2155 u 100n
T007
DISCRIMINATOR
5143C
CDA10.7MC
2140 2u2
2153 1u
3153 4k7
2151 22n_z33n
3151 12k
T011
RADIO_R
2152 1u
3152 4k7
T012
RADIO_L
2150 22n_z33n
3150 12k
8101
T001
T002
6102 1N4148
6101 1N4148
printed
2102 0
2103 100p
7101
TEA5711T
n.c.
FM RF in
AM IF1 in
AM MIXER out
FM MIXER out
FM IF1 in
AM IF2
FM IF1 out
FM IF2 in
IF GND
FM DEMOD
PILOT FILTER
R out
L out
V Stab A
V Stab B
FM Frontend
FM MIXER
FM IF 1
FM IF 2
IF AMP
FM DET
PILOT PRES DET
MATRIX
FM OSC
AM IF
AM/FM INDIC
MUTE
AM DET
PHASE DET
38kHz
SYNCH DET
SOFT MUTE
SWITCH
SDS
CONTROL
AM MIXER
AM OSC
AM/FM SWITCH
AM
FM
MONO/ST SWITCH
VCO
STABILIZER
V-I CONV
LED DRIVER
DIVIDER
19/19/38kHz
AM Frontend
AGC
IF GND
FM RF GND
AM RF in
RIPPLE
AGC/AFC
FM RF out
SUB GND
FM OSC
AM OSC
VCC
TUNING INDIC
AM/FM SWITCH
R VCO
AM/FM OUT
MPX IN
STEREO LED
LOOP FILTER M/ST SWITCH
MUTE
5104 1u
to/from combi board Recorder/Selector part
REF_A
3144 1k
WAVERANGE SWITCH FM/AM
1102 x
9111 w
w1.4V
Vcc
VARCO 2101
C1
C2
C3
C4
AM-RF
5105 MW
T005
2101 160p
MW C4
6
1
9103 x
AM-FRAME AERIAL
T004
T003
9102 x
5106 y LW
LW
2106 y 1n8 220p
FM-RF
9110 *
2122 *
2101 C2
2121 *
2120 *
5120 *
FM-OSC.
5125 *
2127 *
9106 *
2126 *
2125 *
2101 C1
2141 10u
2142 10u
3130 47R
T009
2128 w 10p
3146 w 10k
3145 w 4M7
7140 w BC548C
2148 w 22n
3140 68k
VCO
3141 50k
2143 330p
2144 0u22
BIRDY FILTER
T006
3142 2k2
2146 0u47
2145 0u47
2147 1u
3143 100k
152 KHz
2k2
4k7
T013
3160 47R
5103 2u2
5.4V
T010
+Radio
2160 47u
1101 y
WAVERANGE SWITCH FM/MW/LW
AM-OSCILLATOR
2130 5p6
2101 8p2
5130 MW
5131 y LW
2131 y 100p
2132 y 1p8 220p
9104 x
9105 x
9109 x
0.7V
1.4V
1V
0.6V
0V
2V
0.2V
4.7V
1.2V
0.8V
0.1V
1.1V
Signal path
FM
AM
MPX (Audio Frequency)
EVM
Moby analog A3 170595

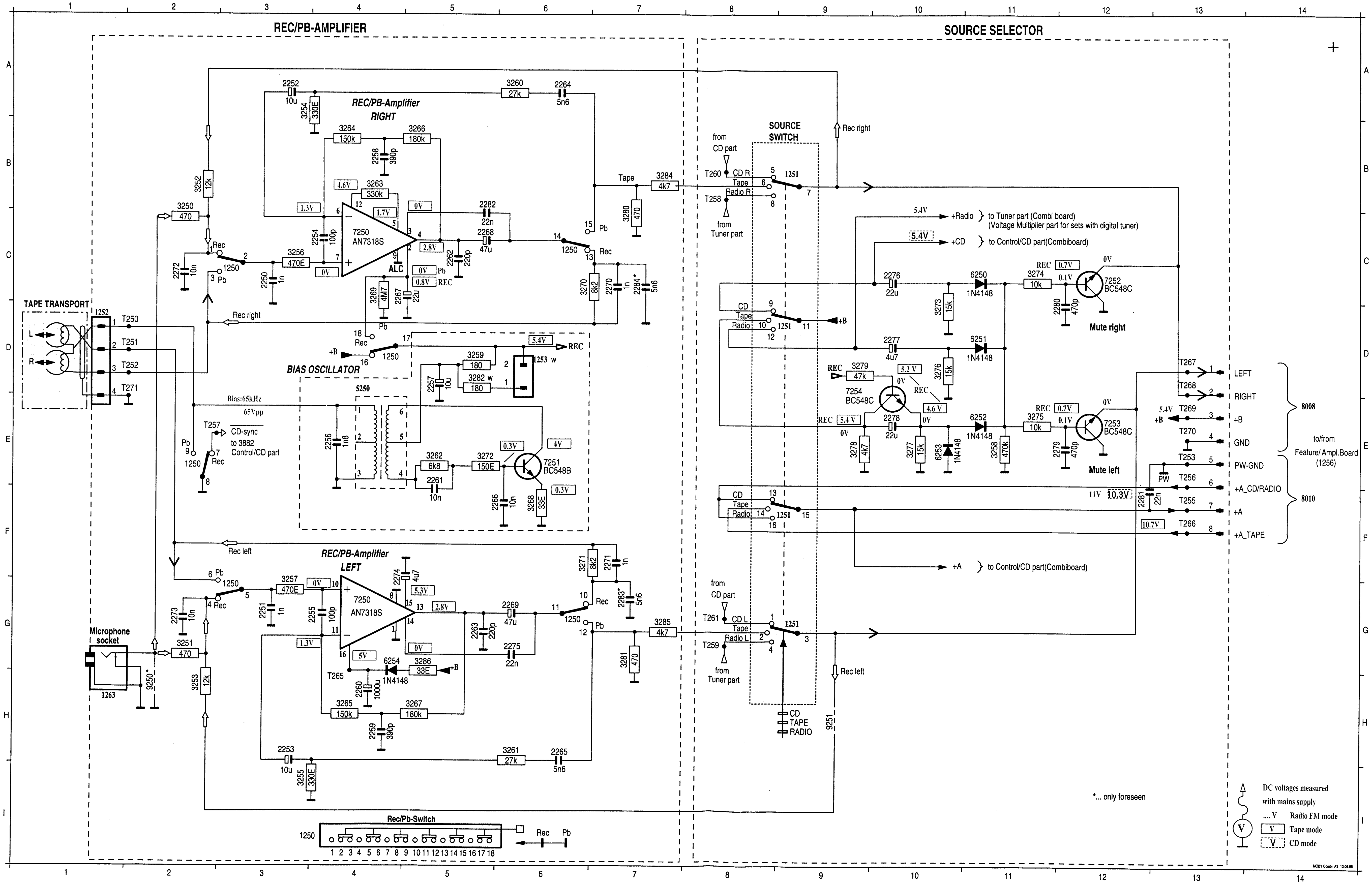
VERSION / ITEM *	FM 87.5-108MHz	EAST EUROPE 65-108 MHz	FM JAPAN 76-108 MHz
2101	20p	40p	40p
2120	27p	10p	27p
2121	-	-	-
2122	-	-	1n
2125	27p	10p	15p
2126	-	330p	-
2127	2p2	-	-
5120	55nH	91nH	55nH
5125	40nH	72nH	80nH
9106	JMP	-	JMP
9110	JMP	JMP	-

u...not for all versions
w...only for Japanese version
x...only for 2 band version (FM/AM)
y...only for 3 band version (FM/MW/LW)
z...only for USA version

DC voltages
........V FM mode stereo
V AM mode

1101	H 5
1102	F 4
1104	H 1
2101	G 7
2101	H 6
2101	G 4
2101	G 5
2102	B 3
2103	B 4
2106	I 4
2120	G 5
2121	G 5
2122	G 6
2125	G 6
2126	G 7
2127	G 6
2128	G 8
2130	H 6
2131	I 6
2132	I 6
2140	B 9
2141	F 5
2142	F 6
2143	G 9
2144	F 9
2145	G10
2146	G10
2147	G10
2148	H 8
2150	B11
2151	A11
2152	A11
2153	A11
2154	A 5
2155	B 7
2160	H10
3130	G 7
3140	G 8
3141	G 8
3142	G10
3143	G11
3144	E 4
3145	G 8
3146	G 8
3150	B12
3151	A12
3152	A12
3153	A12
3160	H10
5103	H11
5104	C12
5105	G 3
5106	I 3
5120	G 6
5125	G 6
5130	H 7
5131	I 7
5140	A 5
5141	A 6
5142	A 7
5143A	B 6
5143B	B 8
5143C	B 9
6101	B 2
6102	B 2
7101	C11
7140	G 8
8101	B 2
9101	A 6
9102	H 2
9103	H 3
9104	I 6
9105	I 7
9106	G 7
9109	I 8
9110	G 6
9111	F 4

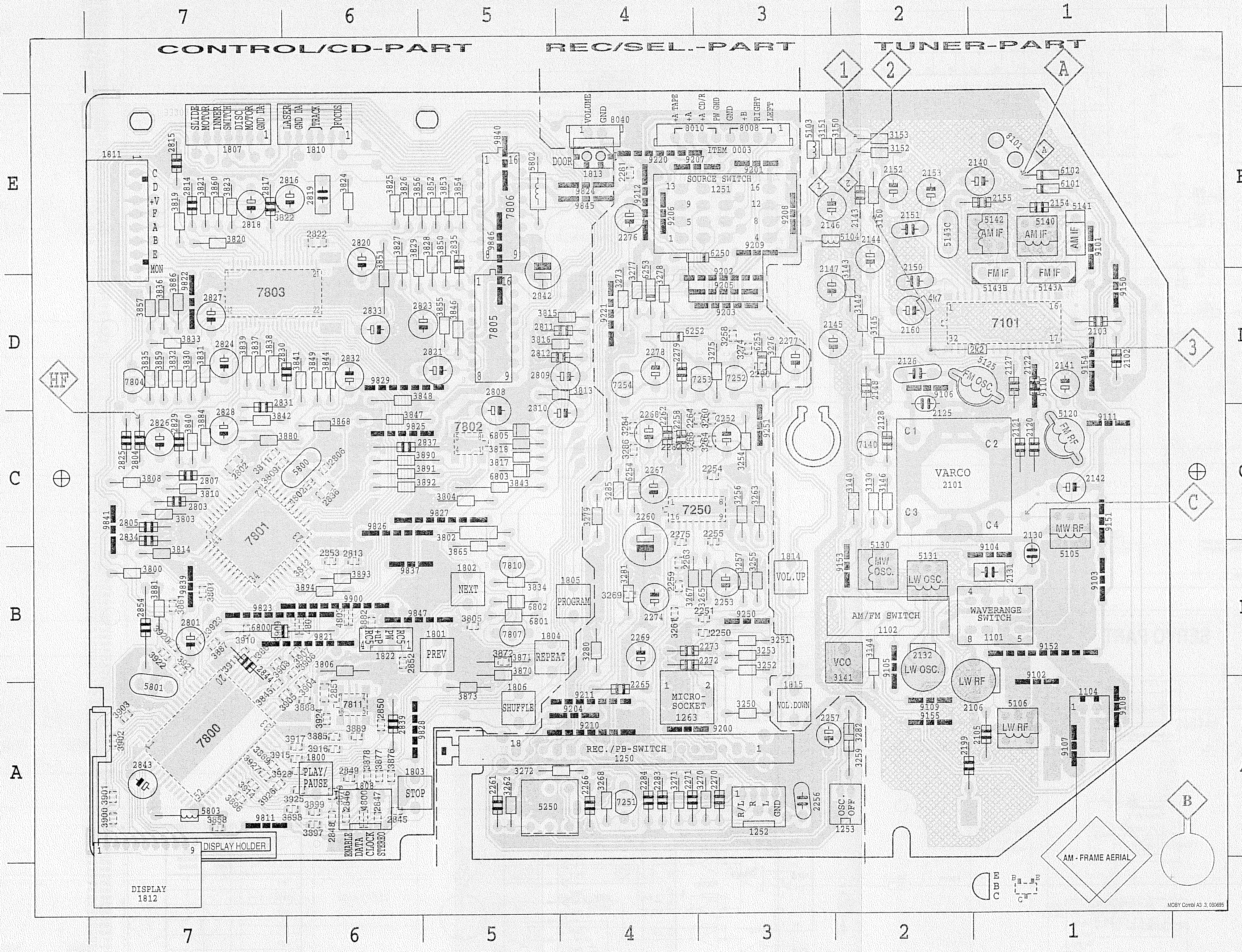
COMBI BOARD
RECORDER/SOURCE SELECTOR PART


REC/PB-AMPLIFIER
SOURCE SELECTOR
REC/PB-Amplifier RIGHT
REC/PB-Amplifier LEFT
7250 AN7318S
ALC
BIAS OSCILLATOR
Bias:65kHz 65Vpp
5250
7251 BC548B
1253 w
TAPE TRANSPORT
1252
T250
T251
T252
T271
Microphone socket
1263
9250*
T257 CD-sync to 3882 Control/CD part
SOURCE SWITCH
1251
from CD part
from Tuner part
T260 CD R Tape Radio R
T258
T261 CD L Tape Radio L
T259
Rec right
Rec left
Tape
Pb
Rec
+B
+Radio } to Tuner part (Combi board) (Voltage Multiplier part for sets with digital tuner)
+CD } to Control/CD part(Combiboard)
+A } to Control/CD part(Combiboard)
7252 BC548C Mute right
7253 BC548C Mute left
7254 BC548C
6250 1N4148
6251 1N4148
6252 1N4148
6253 1N4148
6254 1N4148
T267 LEFT
T268 RIGHT
T269 +B
T270 GND
T253 PW-GND
T256 +A_CD/RADIO
T255 +A
T266 +A_TAPE
8008
8010
to/from Feature/ Ampl.Board (1256)
CD TAPE RADIO
9251
Rec/Pb-Switch
1250
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Rec Pb
*... only foreseen
DC voltages measured with mains supply
.... V Radio FM mode
V Tape mode
V CD mode
MOBY Combi A3 12.06.95

1250	C 3
1250	G 3
1250	E 2
1250	G 6
1250	C 6
1250	D 4
1251	G 9
1251	B 9
1251	D 9
1251	F 9
1252	D 1
1253	D 6
1263	H 1
2250	C 3
2251	G 3
2252	A 3
2253	H 3
2254	C 4
2255	G 3
2256	E 4
2257	D 5
2258	B 4
2259	H 4
2260	H 4
2261	E 5
2262	C 5
2263	G 5
2264	A 6
2265	H 6
2266	F 6
2267	C 4
2268	C 5
2269	G 5
2270	C 7
2271	F 7
2272	C 2
2273	G 2
2274	F 4
2275	G 5
2276	C10
2277	D10
2278	E10
2279	E12
2280	D12
2281	F12
2282	B 5
2283	G 7
2284	C 7
3250	B 2
3251	G 2
3252	B 2
3253	H 2
3254	A 3
3255	I 3
3256	C 3
3257	G 3
3258	E11
3259	D 5
3260	A 6
3261	H 6
3262	E 5
3263	B 4
3264	B 4
3265	H 4
3266	B 5
3267	H 5
3268	F 6
3269	C 4
3270	C 6
3271	F 6
3272	E 5
3273	D10
3274	C11
3275	E11
3276	D10
3277	E10
3278	E 9
3279	D 9
3280	C 7
3281	G 7
3282	D 5
3284	B 7
3285	G 7
3286	G 5
5250	D 4
6250	C11
6251	D11
6252	E11
6253	E10
6254	G 4
7250	C 4
7250	G 4
7251	E 6
7252	C12
7253	E12
7254	D 9
8008	E14
8040	I 1
9250	H 2
9251	H 9

Adjustment of tape speed: *(use Universal Test Cassette SBC420)*
Measure on headphone socket and adjust potmeter on motor to 3150Hz ±1%.

COMBI BOARD (A3) / Component side view


7
6
5
4
3
2
1
CONTROL/CD-PART
REC/SEL.-PART
TUNER-PART
E
D
C
B
A
HF
SLIDE MOTOR
INNER SWITCH
DISC MOTOR
LASER
TRACK
FOCUS
7803
7802
7801
7800
7805
7806
7804
1811
1807
1810
DOOR
1813
VOLUME
GND
8040
8010
8008
+A TAPE
+A
+A CD/R
PW GND
GND
+B
RIGHT
LEFT
SOURCE SWITCH
1251
ITEM 0003
7250
7251
7252
7253
7254
7101
7140
NEXT
PREV
PROGRAM
REPEAT
SHUFFLE
PLAY/PAUSE
STOP
VOL.UP
VOL.DOWN
MICRO-SOCKET
1263
REC./PB-SWITCH
1250
5250
R/L
GND
1252
OSC. OFF
1253
AM/FM SWITCH
1102
WAVERANGE SWITCH
1101
VCO
3141
LW OSC.
2132
LW RF
MW OSC.
5130
5131
MW RF
5105
LW RF
5106
VARCO
2101
FM IF
5143B
5143A
AM IF
5142
5140
5143C
FM OSC.
5125
FM RF
5120
AM - FRAME AERIAL
1104
DISPLAY HOLDER
DISPLAY
1812
ENABLE
DATA
CLOCK
STEREO
A
B
C
1
2
3
MDBY Combi A3 3_000695

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

TUNER PART

1101	B	1
1102	B	2
1104	A	1
2101	C	2
2102	D	1
2103	D	1
2105	A	1
2106	A	1
2120	C	1
2121	C	1
2122	D	1
2125	D	2
2126	D	2
2127	D	1
2128	C	2
2130	B	1
2131	B	1
2132	B	2
2140	E	1
2141	D	1
2142	C	1
2143	E	2
2144	E	2
2145	D	3
2146	E	3
2147	D	3
2148	D	2
2150	D	2
2151	E	2
2152	E	2
2153	E	2
2154	E	1
2155	E	1
2160	D	2
2199	A	2
3130	C	2
3140	C	2
3141	B	2
3142	D	2
3143	D	2
3144	B	2
3145	D	2
3146	C	2
3150	E	2
3151	E	3
3152	E	2
3153	E	2
3160	E	2
5103	E	3
5104	E	3
5105	C	1
5106	A	1
5120	C	1
5125	D	1
5130	B	2
5131	B	2
5140	E	1
5141	E	1
5142	E	1
5143A	D	1
5143B	D	1
5143C	E	2
6101	E	1
6102	E	1
7140	C	2
8101	E	1
9101	E	1
9102	A	1
9103	B	1
9104	B	1
9105	B	2
9106	D	2
9107	A	1
9108	A	1
9109	A	2
9110	D	1
9111	C	1
9150	D	1
9151	C	1
9152	B	1
9153	B	2
9154	D	1
9155	A	2

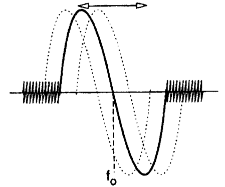
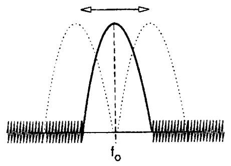
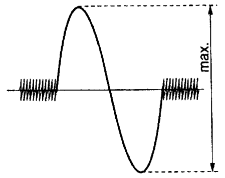
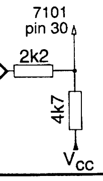
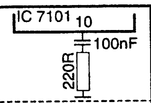
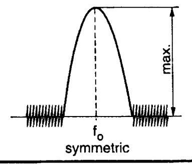
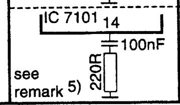
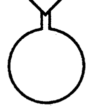
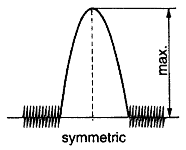
REC/SEL. PART

1250	A	4
1251	E	3
1252	A	3
1253	A	2
1263	A	4
2252	C	3
2253	B	3
2256	A	3
2257	A	3
2258	C	4
2260	B	4
2261	A	5
2262	C	4
2265	A	4
2266	A	4
2267	C	4
2268	C	4
2269	B	4
2270	A	3
2271	A	4
2272	B	4
2273	B	4
2274	B	4
2276	E	4
2277	D	3
2278	D	4
2279	D	4
2283	A	4
2284	A	4
3250	A	3
3251	B	3
3252	B	3
3253	B	3
3254	C	3
3255	B	3
3256	C	3
3257	B	3
3259	A	2
3262	A	5
3263	C	3
3265	B	3
3267	B	4
3268	A	4
3270	A	3
3271	A	4
3272	A	4
3273	D	4
3275	D	3
3276	D	3
3277	D	4
3278	D	4
3279	C	4
3280	B	4
3281	B	4
3282	A	2
3285	C	4
5250	A	5
6250	E	3
6251	D	3
6252	D	4
6253	D	4
6254	C	4
7251	A	4
7252	D	3
7253	D	3
7254	D	4
8008	E	3
8040	E	4
9200	B	3
9201	E	3
9204	A	4
9205	D	3
9206	E	4
9207	E	3
9208	E	3
9209	E	3
9210	A	4
9211	A	4
9212	E	4
9220	E	4
9221	D	4
9250	B	3
9251	C	3

CONTROL/CD-PART

1800	A	6
1801	B	5
1802	B	5
1803	A	6
1804	B	5
1805	B	4
1806	A	5
1807	E	7
1808	A	6
1810	E	6
1811	E	7
1812	A	7
1813	E	4
1814	B	3
1815	A	3
1822	B	6
2801	B	7
2803	C	7
2804	C	7
2805	C	7
2807	C	7
2808	C	5
2809	D	4
2810	C	4
2811	D	4
2812	D	4
2814	E	7
2815	E	7
2816	E	6
2817	E	7
2818	E	7
2819	E	6
2820	E	6
2821	D	5
2823	D	5
2824	D	7
2825	C	7
2826	C	7
2827	D	7
2828	C	7
2829	C	7
2830	D	6
2831	D	7
2832	D	6
2833	D	6
2834	C	7
2835	E	5
2837	C	6
2839	A	6
2842	E	5
2843	A	7
2844	B	7
2854	B	7
3800	B	7
3802	C	5
3803	C	7
3804	C	5
3806	B	6
3808	C	7
3810	C	7
3813	D	4
3814	B	7
3815	D	4
3816	D	4
3817	C	5
3818	C	5
3819	E	7
3820	E	7
3821	E	7
3823	E	7
3824	E	6
3825	E	6
3826	E	6
3827	E	6
3828	E	5
3829	E	6
3830	D	7
3831	D	7
3832	D	7
3833	D	7
3834	B	5
3835	D	7
3836	D	7
3837	D	7
3838	D	7
3839	D	7
3840	C	7
3841	D	6
3842	C	7
3843	C	5
3844	D	6
3846	D	5
3847	C	6
3848	D	6
3849	D	6
3850	E	5
3851	D	6
3852	E	5
3853	E	5
3854	E	5
3855	D	5
3856	E	5
3857	D	7
3859	D	7
3860	E	7
3865	B	5
3868	C	6
3870	B	5
3871	B	5
3873	A	5
3880	C	7
3881	B	7
3884	C	7
3886	D	7
3890	C	6
3891	C	6
3892	C	6
3893	B	6
3894	B	6
5800	C	7
5801	A	7
5802	E	5
5803	A	7
6800	B	7
6801	B	5
6802	B	5
6803	C	5
6805	C	5
7804	D	7
7805	D	5
7806	E	5
7807	B	5
7810	B	5
9811	A	7
9821	B	6
9822	D	7
9823	B	7
9824	E	4
9825	C	6
9826	C	6
9827	C	5
9828	A	6
9829	D	6
9837	B	6
9839	B	7
9840	E	5
9841	C	7
9845	E	4
9846	E	5
9847	B	6
9900	B	6
2250	B	3
2251	B	3
2254	C	3
2255	C	3
2259	B	4
2263	B	4
2264	C	3
2275	C	4
2280	D	3
2281	E	4
2282	C	4
2802	C	7
2806	C	6
2813	B	6
2822	E	6
2836	C	6
2845	A	6
2846	A	6
2847	A	6
2848	A	6
2849	A	6
2850	A	6
2851	A	6
2852	B	6
2853	B	6
3258	D	3
3260	C	3
3261	B	4
3264	C	3
3266	C	3
3269	B	4
3274	D	3
3284	C	4
3286	C	4
3801	B	7
3805	B	5
3809	C	7
3811	C	7
3812	B	6
3822	E	7
3845	A	7
3858	A	7
3861	B	7
3867	B	7
3869	A	7
3872	B	5
3876	A	6
3877	A	6
3878	A	6
3879	A	6
3882	B	6
3885	A	6
3887	B	7
3888	A	6
3889	A	6
3896	A	7
3897	A	6
3898	A	6
3899	A	6
3900	A	7
3901	A	7
3902	A	7
3903	A	7
3904	A	6
3905	A	7
3906	B	6
3907	B	6
3908	B	7
3909	B	7
3910	B	7
3911	B	7
3914	A	7
3915	A	6
3916	A	6
3917	A	6
3920	B	7
3921	B	7
3922	B	7
3923	B	7
3924	A	6
3925	A	6
3926	A	7
3927	A	7
3928	A	6
4800	A	6
4801	B	6
4802	C	6
4803	B	6
7101	D	1
7250	C	4
7800	A	7
7801	C	7
7802	C	5
7803	D	7
7811	A	6

TUNER ADJUSTMENT TABLE

Waverange	Input Frequency	Input	Set tuned to	Adjust	Measure on	Scope / Counter
OSCILLATOR						
FM 87,5 - 108 MHz (65 - 108 MHz) [1] [76 - 108 MHz] [2]	87,35 MHz (64,7 MHz) [75,7 MHz]	◇A Δf = ±500kHz V_{RF} = 100µV	lower band end ▮▭	5125	◇1 or ◇2	
	108,25 MHz		upper band end ▭▮	2101 C1		
MW 525 - 1607 kHz (530 - 1710 kHz) [3]	512 kHz (520 kHz)	◇C Δf = ±30kHz V_{RF} = 100µV	lower band end ▮▭	5130	◇1 or ◇2	
	1635 kHz (1730 kHz)		▭▮ upper band end	2101 C3		
LW [4] 148,5 - 284 kHz	147 kHz		lower band end ▮▭	5131		
	291 kHz		upper band end ▭▮	2132		
FM - RF						
FM 87,5 - 108 MHz (65 - 108 MHz) [1] [76 - 108 MHz] [2]	87,5 MHz (65 MHz) [76 MHz]	◇A Δf = ±500kHz V_{RF} = 10µV	87,5 MHz (65 MHz) [76 MHz]	5120	◇1 or ◇2	
	108 MHz		108 MHz	2101 C2		
VCO						
FM	98 MHz	◇A continuous wave V_{RF} = 1 mV	98 MHz	3141	◇3 	152 ±1 kHz
AM - IF						
AM	468 kHz connect pin 24 of IC 7101 (AM Osc) with short wire to ground	◇C Δf = ±15kHz V_{RF} = 10mV		5140	◇1 or ◇2	
			see remark [5] 	5142		
AM -RF						
MW	560 kHz	◇B  Δf = ±30kHz V_{RF} as low as possible	560 kHz	5105	◇1 or ◇2	
	1500 kHz		1500 kHz	2101 C4		
LW [4]	170 kHz		170 kHz	5106		
	260 kHz		260 kHz	2106		

Tuner Adj. Moby Analog 15.3.95

↕ repeat

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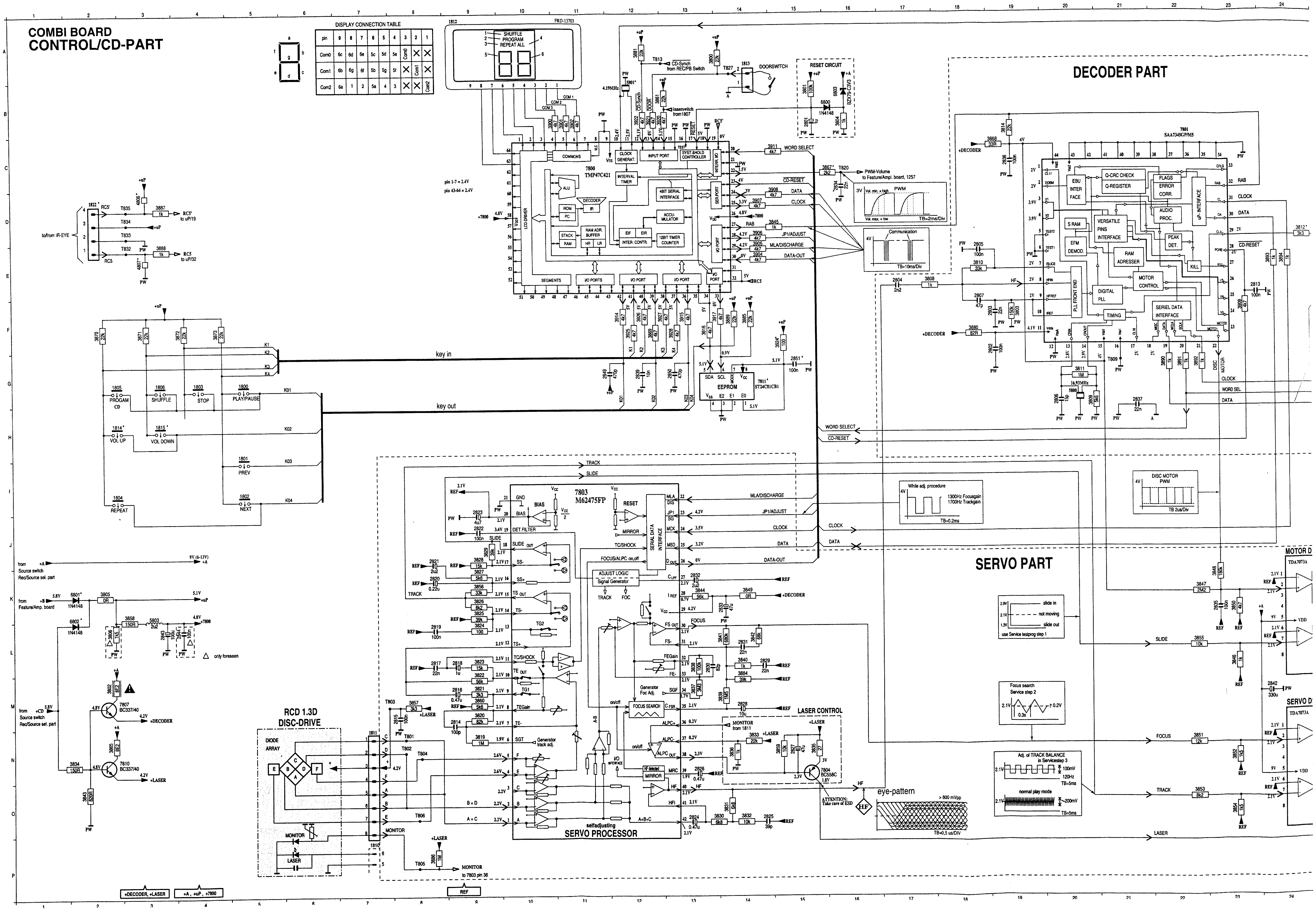
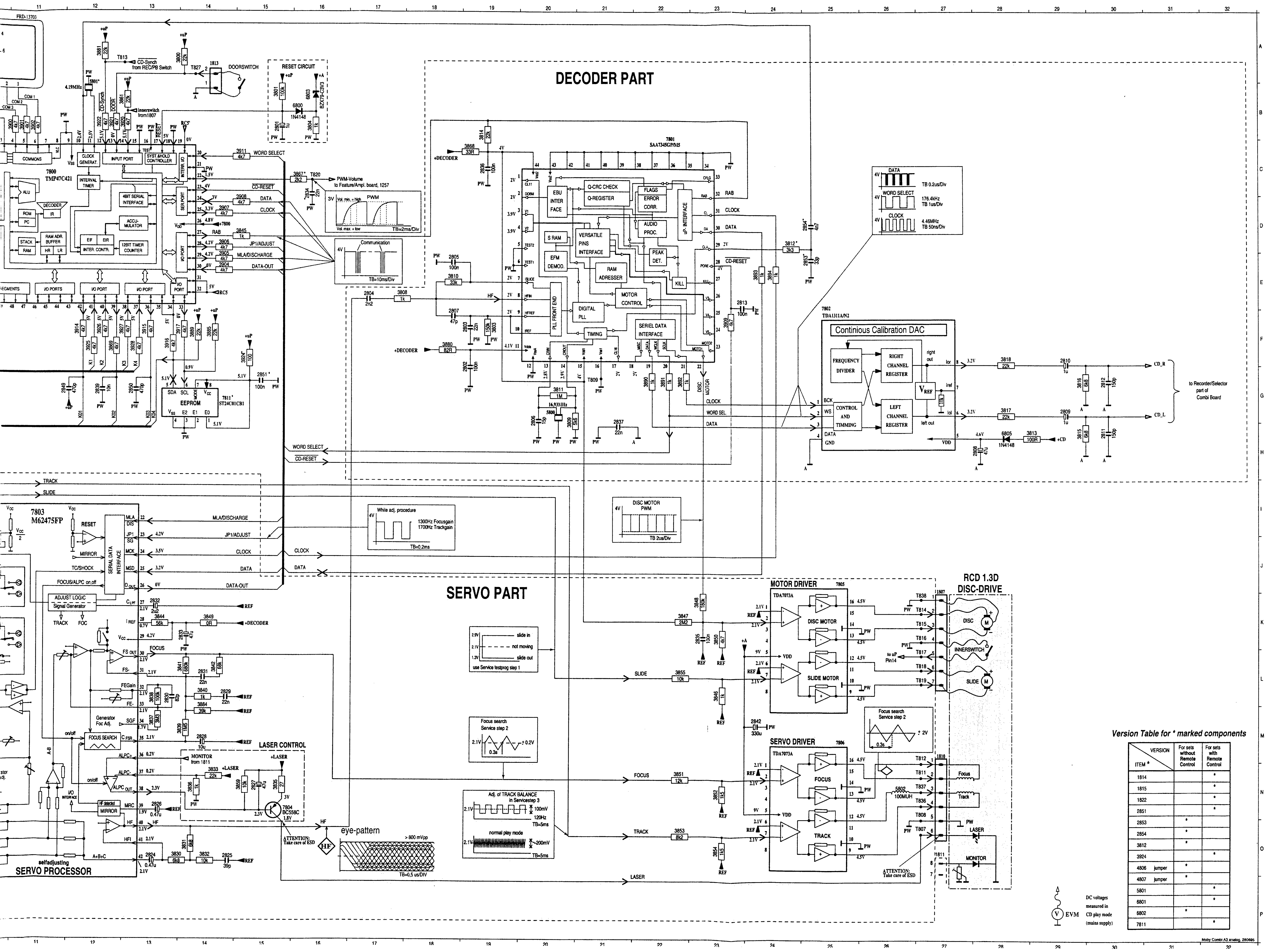
[1] for East Europe /14 [2] for Japan /06 [3] for USA /17 [4] LW not for all versions
[5] RC-network serves for damping the IF-filter while adjusting the other one.

6 - 5

COMBI BOARD
CONTROL/CD-PART


DISPLAY CONNECTION TABLE
1812
FRD-13703
SHUFFLE
PROGRAM
REPEAT ALL
7800
TMP47C421
pin 1-7 = 2.4V
pin 43-64 = 2.4V
COMMONS
CLOCK GENERAT.
INPUT PORT
SYST.&HOLD CONTROLLER
INTERVAL TIMER
ALU
DECODER IR
ROM PC
STACK RAM
RAM ADR. BUFFER
4BIT SERIAL INTERFACE
ACCU-MULATOR
12BIT TIMER COUNTER
INTER. CONTR.
LCD-DRIVER
SER-PORT
I/O PORT
SEGMENTS
I/O PORTS
4.19MHz
CD-Synch from REC/PB Switch
DOORSWITCH
innerswitch from1807
RESET CIRCUIT
WORD SELECT
CD-RESET
DATA
CLOCK
RAB
JP1/ADJUST
MLA/DISCHARGE
DATA-OUT
PWM-Volume to Feature/Ampl. board, 1257
PWM
TB=2ms/Div
Communication
TB=10ms/Div
EEPROM
7811
ST24C01CB1
to/from IR-EYE
key in
key out
PROGAM CD
SHUFFLE
STOP
PLAY/PAUSE
VOL UP
VOL DOWN
PREV
REPEAT
NEXT
DECODER PART
7801
SAA7345GP/M5
Q-CRC CHECK
Q-REGISTER
EBU INTERFACE
FLAGS
ERROR CORR.
AUDIO PROC.
µP- INTERFACE
S RAM
VERSATILE PINS INTERFACE
EFM DEMOD.
PEAK DET.
RAM ADRESSER
KILL
DIGITAL PLL
MOTOR CONTROL
PLL FRONT END
TIMING
SERIEL DATA INTERFACE
16,93MHz
DISC MOTOR PWM
TB 2us/Div
7803
M62475FP
BIAS
RESET
MIRROR
SERIAL DATA INTERFACE
ADJUST LOGIC
Signal Generator
FOCUS SEARCH
selfadjusting
SERVO PROCESSOR
While adj. procedure
1300Hz Focusgain
1700Hz Trackgain
TB=0.2ms
SERVO PART
slide in
not moving
slide out
use Service testprog step 1
Focus search
Service step 2
Adj. of TRACK BALANCE
in Servicestep 3
normal play mode
LASER CONTROL
MONITOR from 1811
7804
BC558C
ATTENTION: Take care of ESD
eye-pattern
> 800 mVpp
TB=0,5 us/DIV
MOTOR D
TDA7073A
SERVO D
RCD 1.3D
DISC-DRIVE
DIODE ARRAY
MONITOR
LASER
7807
BC337/40
7810
BC337/40
from Source switch Rec/Source sel. part
from Feature/Amp. board
only foreseen
TRACK
SLIDE
FOCUS
+DECODER, +LASER
+A, +uP, +7800
REF

pin	9	8	7	6	5	4	3	2	1
Com0	6c	6d	6e	5c	5d	5e	Com0	X	X
Com1	6b	6g	6f	5b	5g	5f	X	Com1	X
Com2	6a	1	2	5a	4	3	X	X	Com2

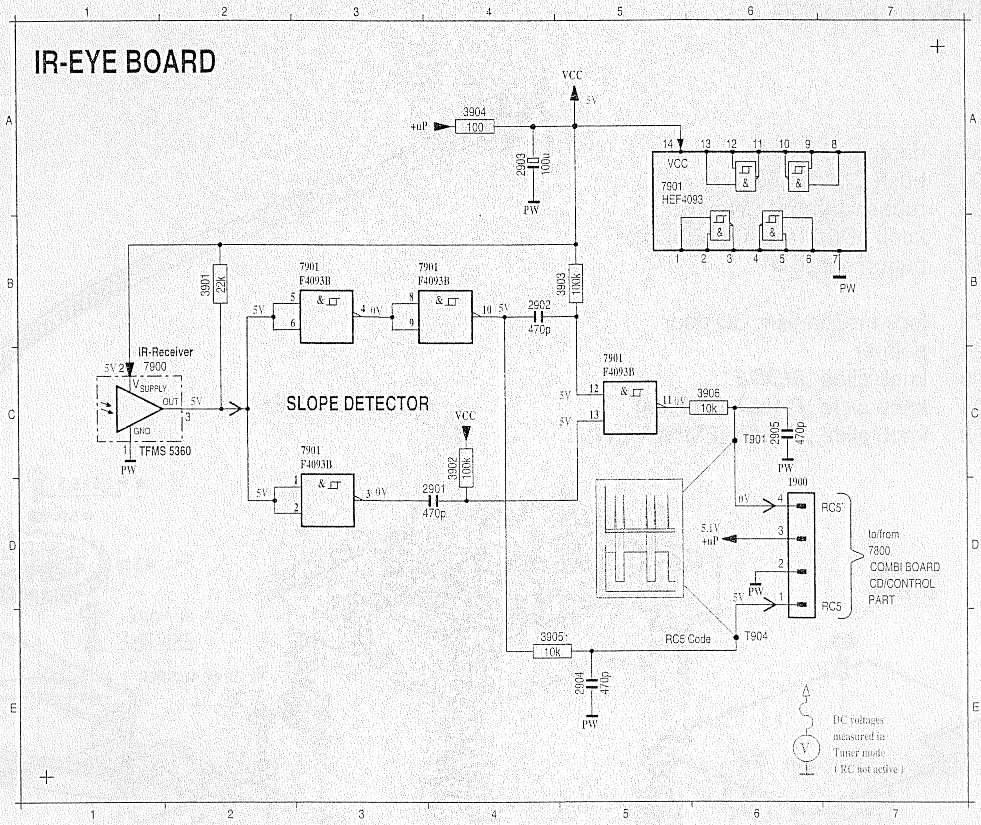

DECODER PART
SERVO PART
7800 TMP47C421
7801 SAA7345GP/M5
7802 TDA1311A/N2
Continious Calibration DAC
7803 M62475FP
SERIAL DATA INTERFACE
7805 MOTOR DRIVER TDA7073A
7806 SERVO DRIVER TDA7073A
DISC MOTOR
SLIDE MOTOR
FOCUS
TRACK
RCD 1.3D DISC-DRIVE
RESET CIRCUIT
DOORSWITCH
7811 ST24C01CB1 EEPROM
LASER CONTROL
7804 BC558C
selfadjusting SERVO PROCESSOR
ADJUST LOGIC Signal Generator
FOCUS SEARCH
WORD SELECT
CD-RESET
CLOCK
DATA
RAB
JP1/ADJUST
MLA/DISCHARGE
DATA-OUT
PWM-Volume to Feature/Ampl. board, 1257
Communication
DISC MOTOR PWM
While adj. procedure
1300Hz Focusgain
1700Hz Trackgain
Focus search Service step 2
Adj. of TRACK BALANCE in Servicestep 3
normal play mode
eye-pattern
ATTENTION: Take care of ESD
to Recorder/Selector part of Combi Board
CD_R
CD_L
EVM
DC voltages measured in CD play mode (mains supply)

Version Table for * marked components

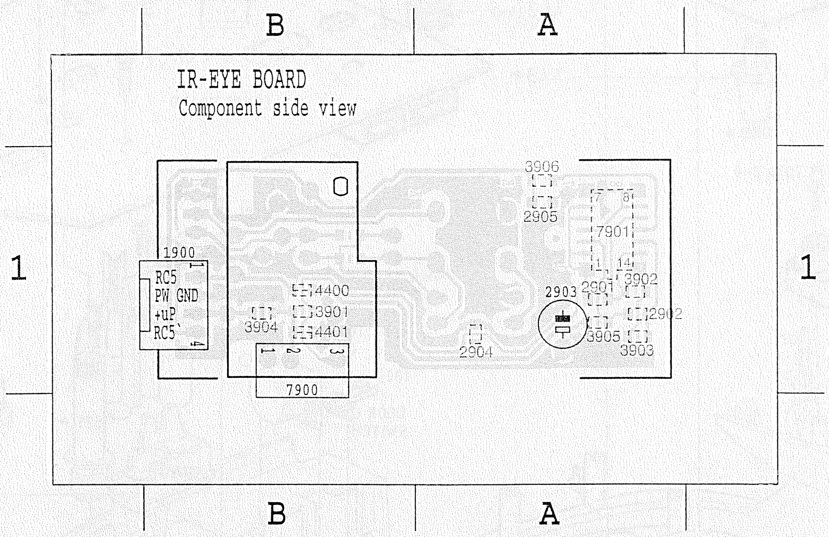
VERSION / ITEM *	For sets without Remote Control	For sets with Remote Control
1814		*
1815		*
1822		*
2851		*
2853	*	
2854	*	
3812	*	
3924		*
4806 jumper	*	
4807 jumper	*	
5801		*
6801		*
6802	*	
7811		*

Moby Combi A3 analog. 280695

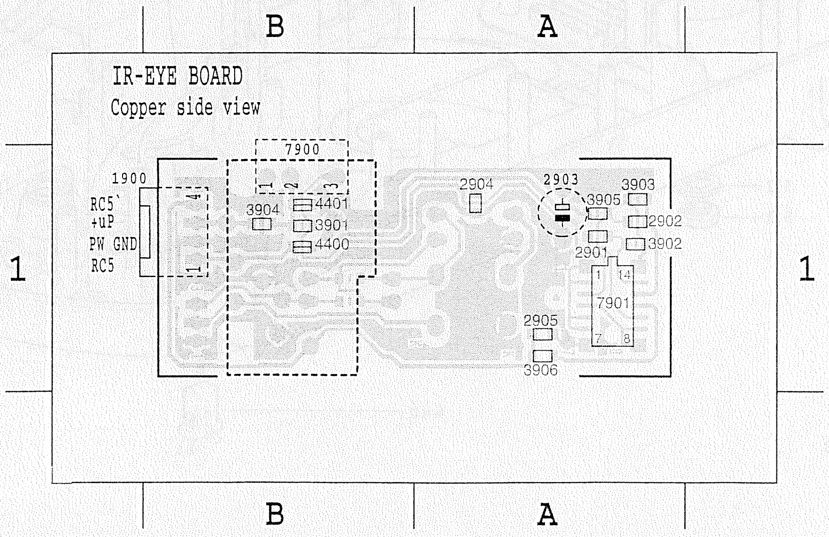
1800	G 5
1801	I 5
1802	I 5
1803	G 4
1804	I 2
1805	G 2
1806	G 3
1807	J27
1810	M27
1811	N 7
1812	A 9
1813	A14
1814	H 2
1815	H 3
1822	D 2
2801	B15
2802	G19
2803	F19
2804	E17
2805	E18
2806	G20
2807	F18
2808	H28
2809	G29
2810	F29
2811	H30
2812	G30
2813	E23
2814	M 9
2815	M 8
2816	M 9
2817	L 8
2818	L 9
2819	L 8
2820	K 8
2821	J 8
2822	J 9
2823	J 9
2824	O13
2825	O14
2826	N13
2827	N15
2828	M14
2829	L14
2830	L13
2831	L14
2832	K13
2833	K14
2834	C16
2835	K23
2836	C19
2837	H21
2839	G12
2842	M24
2843	L 3
2844	L 4
2849	G11
2850	G13
2851	G15
2853	E25
2854	D25
3800	A13
3801	B15
3802	M 2
3803	F19
3804	B16
3805	K 2
3806	L 2
3808	E17
3809	G20
3810	E18
3811	G20
3812	D24
3813	H29
3814	B19
3815	H29
3816	G29
3817	G28
3818	F28
3819	N 9
3820	M 9
3821	M 9
3822	M 9
3823	L 9
3824	L 9
3825	K 9
3826	K 9
3827	K 9
3828	J 9
3829	J 9
3830	O13
3831	O14
3832	O14
3833	N14
3834	N 2
3835	N15
3836	N14
3837	M13
3838	L13
3839	M14
3840	L14
3841	L14
3842	L14
3843	O 2
3844	K13
3845	D15
3846	L23
3847	K22
3848	K23
3849	K14
3850	K23
3851	N22
3852	N23
3853	O22
3854	O23
3855	L22
3856	K 9
3857	M 8
3858	L 3
3859	N15
3860	M 9
3861	B12
3865	N 2
3867	C16
3868	C19
3869	F12
3870	F 2
3871	F 3
3872	F 4
3873	F 4
3880	F18
3881	A12
3884	M14
3885	F14
3886	P 8
3887	D 3
3888	E 3
3889	F14
3890	G22
3891	G22
3892	G22
3893	E24
3894	E24
3900	B11
3901	B11
3902	B11
3904	E14
3905	E14
3906	D14
3907	D14
3908	D15
3909	F23
3911	C15
3914	F12
3915	F13
3916	F13
3917	F13
3920	B13
3921	B12
3922	B12
3924	F15
3925	F12
3926	F12
3927	F12
3928	F13
4806	D 3
4807	E 3
5800	H20
5801	B12
5802	N26
5803	L 3
6800	B15
6801	K 2
6802	L 2
6803	B16
6805	H28
7800	C11
7801	C22
7802	F25
7803	I13
7804	N15
7805	J25
7806	M25
7807	M 2
7810	N 2
7811	G14


IR-EYE BOARD
VCC
5V
+uP
3904
100
2903
100u
PW
14 13 12 11 10 9 8
VCC
7901
HEF4093
1 2 3 4 5 6 7
3901
22k
7901
F4093B
3903
100k
2902
470p
SLOPE DETECTOR
IR-Receiver
7900
VSUPPLY
OUT
GND
TFMS 5360
3902
100k
2901
470p
3906
10k
2905
470p
T901
1900
RC5`
RC5
to/from
7800
COMBI BOARD
CD/CONTROL
PART
5.1V
+uP
3905
10k
2904
470p
RC5 Code
T904
DC voltages
measured in
Tuner mode
(RC not active)
1 2 3 4 5 6 7
A B C D E

1900	D	6
2901	D	4
2902	B	4
2903	A	4
2904	E	5
2905	C	6
3901	B	2
3902	C	4
3903	B	5
3904	A	4
3905	E	4
3906	C	6
7900	C	1
7901	C	3
7901	B	3
7901	B	3
7901	C	5


B
A
1
IR-EYE BOARD
Component side view
1900
RC5
PW GND
+uP
RC5`
4400
3901
3904
4401
7900
3906
2905
7901
2903
2901
3902
2902
2904
3905
3903

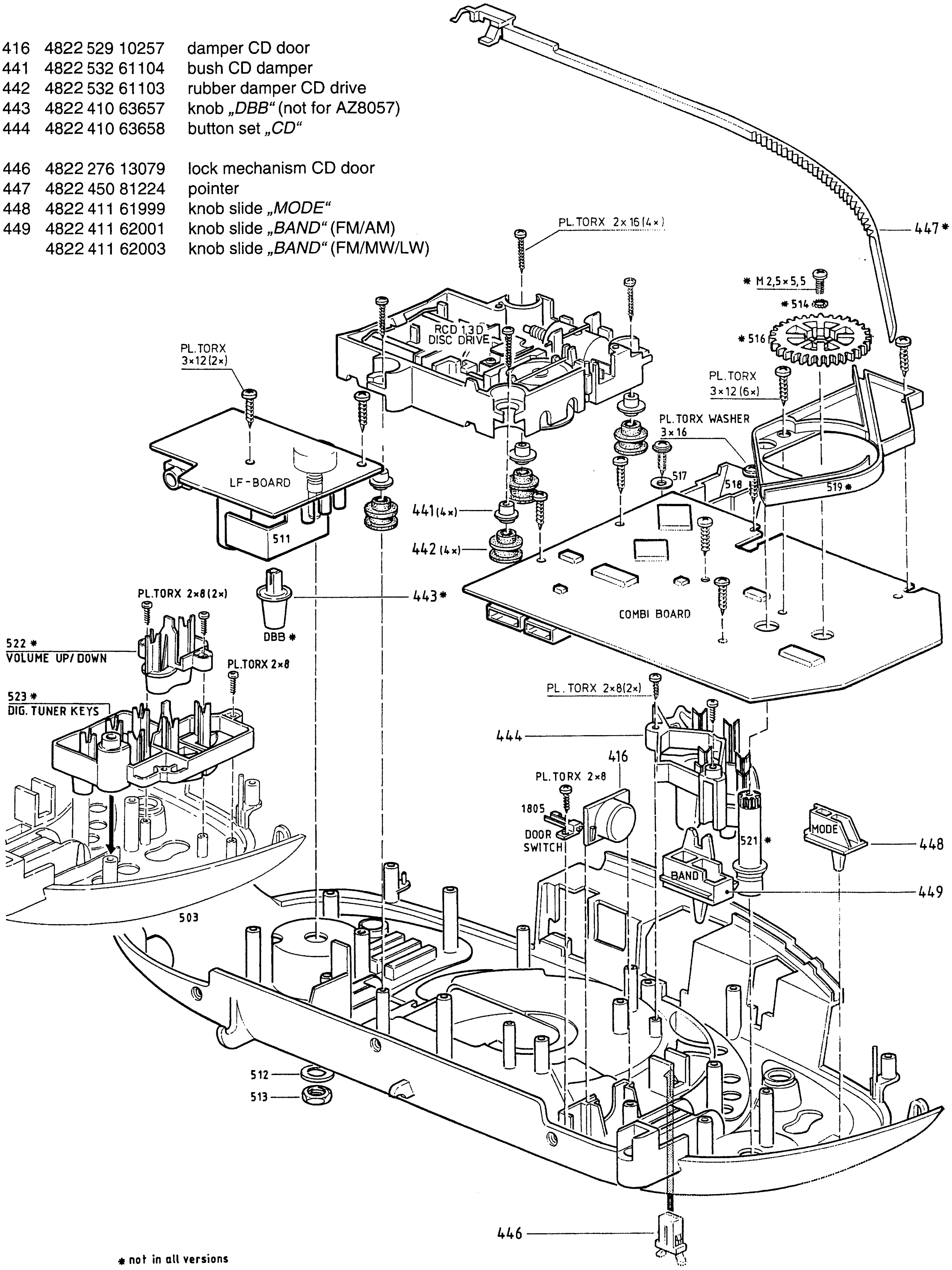
1900	B	1
2903	A	1
7900	B	1
2901	A	1
2902	A	1
2904	A	1
2905	A	1
3901	B	1
3902	A	1
3903	A	1
3904	B	1
3905	A	1
3906	A	1
4400	B	1
4401	B	1
7901	A	1


B
A
1
IR-EYE BOARD
Copper side view
7900
1900
RC5`
+uP
PW GND
RC5
3904
4401
3901
4400
2904
2903
3905
3903
2902
3902
2901
7901
2905
3906

1900	B	1
2903	A	1
7900	B	1
2901	A	1
2902	A	1
2904	A	1
2905	A	1
3901	B	1
3902	A	1
3903	A	1
3904	B	1
3905	A	1
3906	A	1
4400	B	1
4401	B	1
7901	A	1

EXPLODED VIEW / DRAWING 1

416	4822 529 10257	damper CD door
441	4822 532 61104	bush CD damper
442	4822 532 61103	rubber damper CD drive
443	4822 410 63657	knob *„DBB“* (not for AZ8057)
444	4822 410 63658	button set *„CD“*
446	4822 276 13079	lock mechanism CD door
447	4822 450 81224	pointer
448	4822 411 61999	knob slide *„MODE“*
449	4822 411 62001	knob slide *„BAND“* (FM/AM)
	4822 411 62003	knob slide *„BAND“* (FM/MW/LW)


PL.TORX 2×16(4×)
447*
* M 2,5×5,5
*514
*516
RCD 13D DISC DRIVE
PL.TORX 3×12(2×)
PL.TORX 3×12(6×)
PL.TORX WASHER 3×16
517
518
519*
LF-BOARD
511
441(4×)
442(4×)
443*
DBB*
COMBI BOARD
PL.TORX 2×8(2×)
522* VOLUME UP/DOWN
PL.TORX 2×8
523* DIG. TUNER KEYS
503
PL.TORX 2×8(2×)
444
416
PL.TORX 2×8
1805
DOOR SWITCH
521*
MODE
448
BAND
449
512
513
446

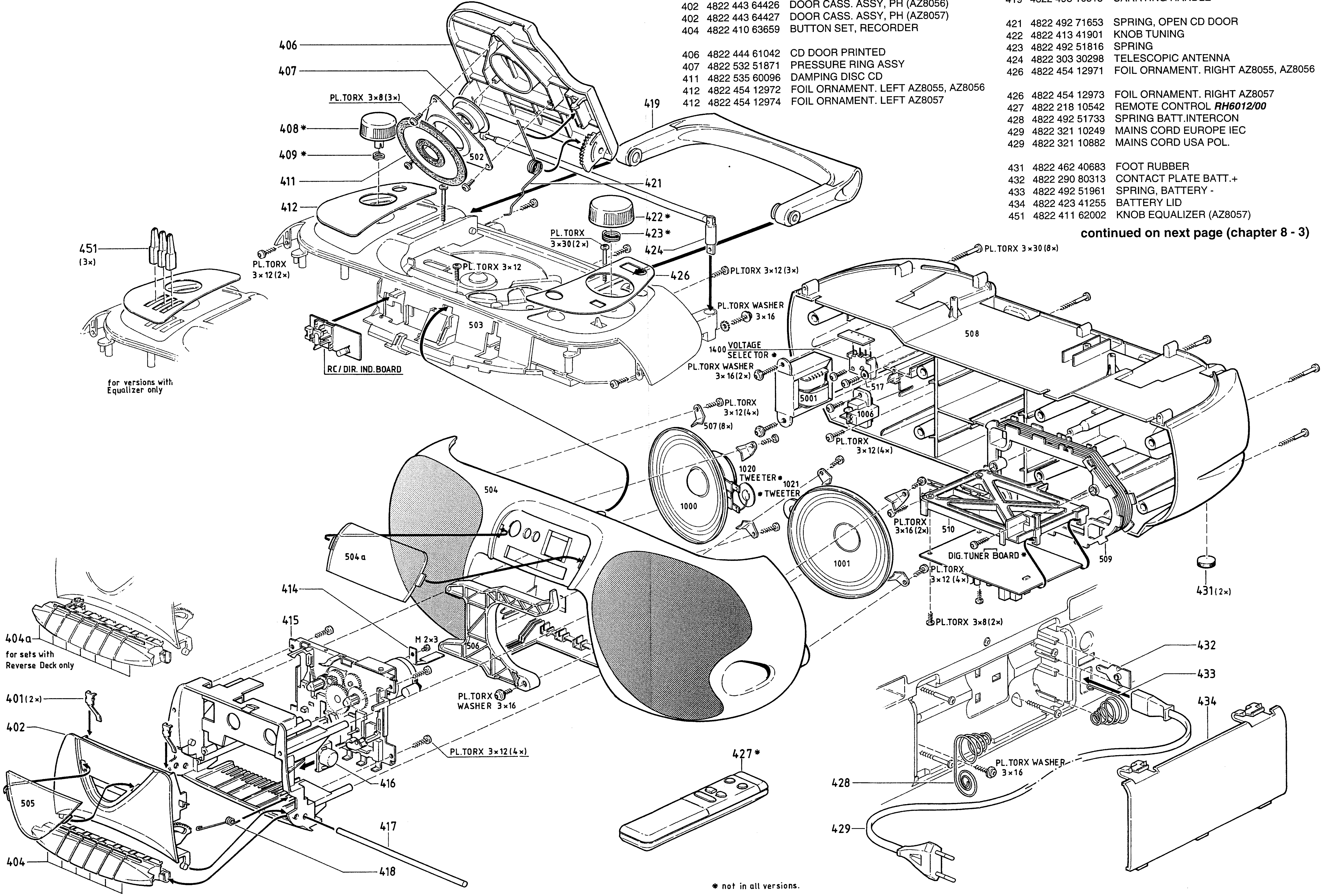
* not in all versions

EXPLODED VIEW / Drawing 2

MECHANICAL PARTS

401	4822 492 70231	SPRING, CASS.PRESS
402	4822 443 64406	DOOR CASS. ASSY, MVX (AZ8055)
402	4822 443 64426	DOOR CASS. ASSY, PH (AZ8056)
402	4822 443 64427	DOOR CASS. ASSY, PH (AZ8057)
404	4822 410 63659	BUTTON SET, RECORDER
406	4822 444 61042	CD DOOR PRINTED
407	4822 532 51871	PRESSURE RING ASSY
411	4822 535 60096	DAMPING DISC CD
412	4822 454 12972	FOIL ORNAMENT. LEFT AZ8055, AZ8056
412	4822 454 12974	FOIL ORNAMENT. LEFT AZ8057
414	4822 492 52397	SPRING REC.LEVER
416	4822 529 10257	DAMPER CASS.DOOR
417	4822 535 93535	AXLE, RECORDER KEYS
418	4822 492 42709	SPRING,OPEN CASSDOOR
419	4822 498 10515	CARRYING HANDLE
421	4822 492 71653	SPRING, OPEN CD DOOR
422	4822 413 41901	KNOB TUNING
423	4822 492 51816	SPRING
424	4822 303 30298	TELESCOPIC ANTENNA
426	4822 454 12971	FOIL ORNAMENT. RIGHT AZ8055, AZ8056
426	4822 454 12973	FOIL ORNAMENT. RIGHT AZ8057
427	4822 218 10542	REMOTE CONTROL ***RH6012/00***
428	4822 492 51733	SPRING BATT.INTERCON
429	4822 321 10249	MAINS CORD EUROPE IEC
429	4822 321 10882	MAINS CORD USA POL.
431	4822 462 40683	FOOT RUBBER
432	4822 290 80313	CONTACT PLATE BATT.+
433	4822 492 51961	SPRING, BATTERY -
434	4822 423 41255	BATTERY LID
451	4822 411 62002	KNOB EQUALIZER (AZ8057)

continued on next page (chapter 8 - 3)


406
407
PL.TORX 3×8(3×)
408*
409*
411
412
502
419
421
422*
423*
424
PL.TORX 3×30(2×)
PL.TORX 3×12(2×)
PL.TORX 3×12
426
451 (3×)
for versions with Equalizer only
503
RC/DIR. IND.BOARD
PL.TORX 3×12(3×)
PL.TORX WASHER 3×16
1400 VOLTAGE SELECTOR *
PL.TORX WASHER 3×16(2×)
5001
517
1006
PL.TORX 3×30(8×)
508
PL.TORX 3×12(4×)
507(8×)
PL.TORX 3×12(4×)
1020 TWEETER*
1021 *TWEETER
1000
1001
504
504a
PL.TORX 3×16(2×)
510
DIG.TUNER BOARD*
509
PL.TORX 3×12(4×)
PL.TORX 3×8(2×)
431(2×)
414
415
M 2×3
506
PL.TORX WASHER 3×16
404a
for sets with Reverse Deck only
401(2×)
402
416
PL.TORX 3×12(4×)
427*
432
433
434
428
PL.TORX WASHER 3×16
429
505
417
418
404

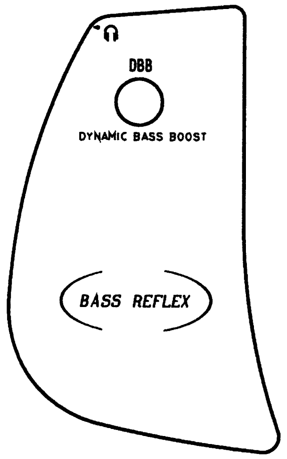
* not in all versions.

MECHANICAL PARTS continued

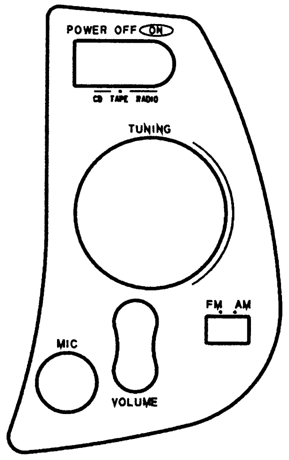
1000	4822 240 30739	LOUDSPEAKER, 4",4OHM
1001	4822 240 30739	LOUDSPEAKER, 4",4OHM
1006	4822 265 20706	SOCKET MAINS UL POL.
1006	4822 267 30738	MAINS SOCKET, IEC
1020	4822 240 70273	TWEETER; PIEZZO
1021	4822 240 70273	TWEETER; PIEZZO
1400	4822 277 21234	SWITCH, VOLTAGE SELECTOR
1805	4822 276 12165	SWITCH LEAF, DOOR
5001	4822 146 31464	TRANSF. MAINS /00
5001	4822 146 31463	TRANSF. MAINS /01
5001	4822 146 31454	TRANSF. MAINS /17

Only those parts of which a service code number is stated are normal service parts.

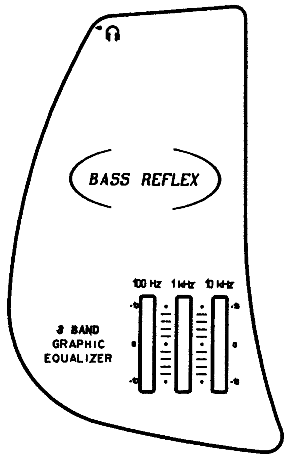
Overview
ORNAMENTAL FOILS


DBB
DYNAMIC BASS BOOST
BASS REFLEX

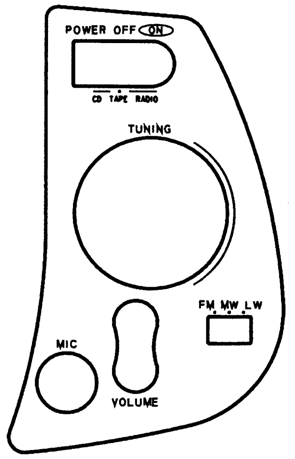
4822 454 12972


POWER OFF ON
CD TAPE RADIO
TUNING
MIC
VOLUME
FM AM

4822 454 12971

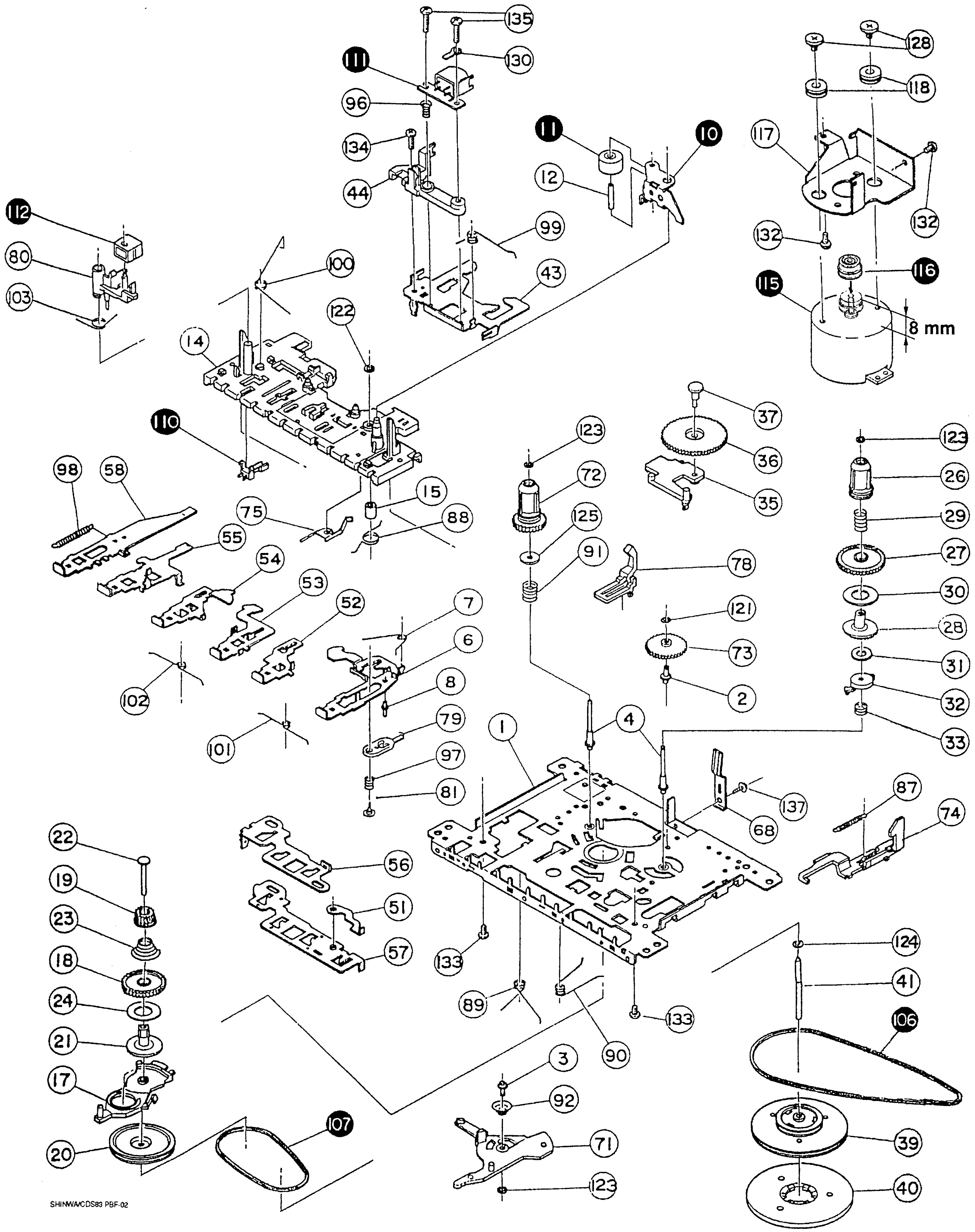

BASS REFLEX
100 Hz
1 kHz
10 kHz
3 BAND
GRAPHIC
EQUALIZER

4822 454 12974


POWER OFF ON
CD TAPE RADIO
TUNING
MIC
VOLUME
FM MW LW

4822 454 12973

TAPE TRANSPORT


135
130
111
96
134
44
12
11
10
99
43
128
118
117
132
132
116
115
8 mm
112
80
103
100
122
14
110
98
58
75
55
15
88
54
53
52
7
6
8
79
97
81
102
101
123
72
125
91
78
37
36
35
121
73
2
4
1
137
68
87
74
123
26
29
27
30
28
31
32
33
22
19
23
18
24
21
17
20
107
56
51
57
133
89
90
133
3
92
71
123
124
41
106
39
40
SHINWA/CDS83 PBF-02

Only those parts of which a service code number is stated are normal service parts.

	4822 691 21014	TAPE TRANSPORT **CDS-83PBF-02**
10	4822 528 70849	PINCH ROLLER ARM
11	4822 528 70695	PINCH ROLLER ASSY
106	4822 358 31325	MAIN BELT
107	4822 358 31124	SUB BELT
110	4822 278 90663	LEAF SWITCH, MOTOR ON/OFF
111	4822 249 10413	REC/PB-HEAD, MS15R-AA2N1
112	4822 249 40268	ERASE HEAD, TDK6PA
115	4822 361 21656	MOTOR, EG-530AD-9B
116	4822 528 81497	MOTOR PULLEY

ELECTRICAL PARTSLIST

FEATURE 2 Board

MISCELLANEOUS

1254	4822 267 31468	SOCKET HEADPH. 3,5MM
1255	4822 276 12648	SWITCH PUSH, DBB
1400	4822 277 21234	VOLTAGE SELECTOR

DIODES

6250	5322 130 31504	BZX79-C20
6251	4822 130 30621	1N4148
6252	4822 130 30621	1N4148
6253	5322 130 30684	1N4002
6254	5322 130 30684	1N4002
6255	5322 130 30684	1N4002
6256	5322 130 30684	1N4002
6257	4822 130 30621	1N4148

TRANSISTORS

7250	5322 130 60068	BC558C
7251	4822 130 41327	BC327-40
7252	4822 130 44196	BC548C
7253	5322 130 60068	BC558C
7256	4822 130 44196	BC548C
7257	4822 130 61067	XN1401 (DOUBLE PNP)
7258	4822 130 61067	XN1401 (DOUBLE PNP)
7260	4822 130 44246	BC549C
7261	4822 130 44246	BC549C
7262	4822 130 44196	BC548C
7263	4822 130 44196	BC548C

INTEGRATED CIRCUITS

7254	4822 209 31544	TA8227P, POWER STAGE

COILS

5250	4822 526 10494	FERR. BEAD ON WIRE	stage .6 onwards
5251	4822 526 10494	FERR. BEAD ON WIRE	

RESISTORS

3250	4822 116 52256	2k2	5%	0,16W	
3252	4822 116 52296	6k8	5%	0,5W	
3253	4822 116 52296	6k8	5%	0,5W	
3257	4822 116 52224	470R	5%	0,5W	
3258	4822 116 52224	470R	5%	0,5W	
3259	4822 116 52202	82R	5%	0,16W	DBB
3259	4822 116 52211	150R	5%	0,5W	Equal.
3260	4822 116 52202	82R	5%	0,16W	DBB
3260	4822 116 52211	150R	5%	0,5W	Equal.
3261	4822 116 83864	10k	5%	0,5W	
3262	4822 116 52224	470R	5%	0,5W	
3263	4822 116 52226	560R	5%	0,5W	
3264	4822 116 52222	390R	5%	0,16W	
3265	4822 050 11002	1k	5%	0,2W	
3266	4822 116 52257	22k	5%	0,5W	DBB
3266	4822 116 83864	10k	5%	0,5W	Equal.
3267	4822 116 52257	22k	5%	0,5W	DBB
3267	4822 116 83864	10k	5%	0,5W	Equal.
3268	4822 116 52206	120R	5%	0,5W	
3269	4822 116 52206	120R	5%	0,5W	
3270	4822 116 52224	470R	5%	0,5W	
3271	4822 050 18208	8R2	1%	0,4W	
3272	4822 116 52284	47k	5%	0,16W	DBB
3272	4822 116 52251	18k	5%	0,16W	Equal.
3273	4822 116 52284	47k	5%	0,16W	DBB

RESISTORS

3273	4822 116 52251	18k	5%	0,16W	Equal.
3274	4822 116 52256	2k2	5%	0,16W	
3275	4822 116 52256	2k2	5%	0,16W	
3276	4822 116 52289	5k6	5%	0,16W	
3277	4822 116 52303	8k2	5%	0,5W	
3279	4822 116 52238	12k	5%	0,5W	
3280	4822 116 52238	12k	5%	0,5W	
3281	4822 116 52296	6k8	5%	0,5W	
3282	4822 116 52296	6k8	5%	0,5W	
3283	4822 116 52272	330k	5%	0,5W	
3283	4822 116 83874	220k	5%	0,5W	stage .6 onwards
3284	4822 116 52272	330k	5%	0,5W	
3284	4822 116 83874	220k	5%	0,5W	stage .6 onwards
3285	4822 116 52231	820R	5%	0,5W	
3285	4822 116 52256	2k2	5%	0,5W	stage .6 onwards
3286	4822 116 52231	820R	5%	0,5W	
3286	4822 116 52256	2k2	5%	0,5W	stage .6 onwards
3287	4822 116 52284	47k	5%	0,5W	
3288	4822 116 52256	2k2	5%	0,16W	
3290	4822 116 52256	2k2	5%	0,16W	
3291	4822 116 52256	2k2	5%	0,16W	
3292	4822 116 83864	10k	5%	0,5W	DBB
3292	4822 116 52263	2k7	5%	0,5W	Equal.
3293	4822 116 83864	10k	5%	0,5W	DBB
3293	4822 116 52263	2k7	5%	0,5W	Equal.
3294	4822 116 52224	470R	5%	0,5W	
3295	4822 116 52224	470R	5%	0,5W	
3296	4822 116 52244	15k	5%	0,5W	
3297	4822 116 52244	15k	5%	0,5W	
3298	4822 116 52175	100R	5%	0,5W	
3299	4822 116 52228	680R	5%	0,5W	Equal.
3299	4822 116 52256	2k2	5%	0,5W	DBB
3300	4822 116 52228	680R	5%	0,5W	Equal.
3300	4822 116 52256	2k2	5%	0,5W	DBB
3301	4822 116 83864	10k	5%	0,5W	
3302	4822 116 83864	10k	5%	0,5W	
3304	4822 116 52238	12k	5%	0,16W	DBB
3304	4822 116 52256	2k2	5%	0,5W	Equal.
3305	4822 116 52238	12k	5%	0,16W	DBB
3305	4822 116 52256	2k2	5%	0,5W	Equal.
3306	4822 116 52297	68k	5%	0,5W	stage .6 onwards
3307	4822 116 52297	68k	5%	0,5W	stage .6 onwards
3308	4822 116 52234	100k	5%	0,5W	
3309	4822 116 52245	150k	5%	0,16W	
3312	4822 100 12267	SLIDE POT. 10k			
3313	4822 100 12267	SLIDE POT. 10k			
3314	4822 100 12267	SLIDE POT. 10k			
3315	4822 116 52283	4k7	5%	0,5W	
3316	4822 116 52283	4k7	5%	0,5W	
3317	4822 116 52296	6k8	5%	0,5W	
3318	4822 116 52296	6k8	5%	0,5W	
3319	4822 116 52244	15k	5%	0,5W	
3320	4822 116 52244	15k	5%	0,5W	
3321	4822 116 52269	3k3	5%	0,5W	
3322	4822 116 52269	3k3	5%	0,5W	
3323	4822 116 52257	22k	5%	0,5W	
3324	4822 116 52257	22k	5%	0,5W	

CAPACITORS

2250	4822 124 40246	4,7µF	20%	63V	
2251	4822 124 40246	4,7µF	20%	63V	
2252	4822 124 41584	100µF	20%	10V	
2253	5322 121 42386	100nF	5%	63V	
2254	4822 124 41596	22µF	20%	50V	
2255	4822 124 41596	22µF	20%	50V	
2256	4822 122 33169	680pF	10%	50V	
2257	4822 122 33169	680pF	10%	50V	
2258	4822 124 41407	0,47µF	20%	63V	
2259	4822 124 41407	0,47µF	20%	63V	
2260	4822 124 41458	4700µF	20%	16V	
2261	4822 124 40433	47µF	20%	25V	
2262	4822 122 33169	680pF	10%	50V	
2263	4822 122 33169	680pF	10%	50V	
2264	5322 121 42386	100nF	5%	63V	
2265	5322 121 42386	100nF	5%	63V	
2266	4822 124 40433	47µF	20%	25V	
2267	4822 124 40433	47µF	20%	25V	
2268	4822 124 41997	470pF	20%	10V	
2269	4822 124 41997	470pF	20%	10V	
2271	4822 124 41407	0,47µF	20%	63V	
2272	4822 124 41407	0,47µF	20%	63V	
2273	4822 122 10319	82pF	5%	50V	DBB
2273	4822 122 10466	220pF	10%	50V	Equal.
2274	4822 122 10319	82pF	5%	50V	DBB
2274	4822 122 10466	220pF	10%	50V	Equal.
2275	4822 124 40433	47µF	20%	25V	
2276	4822 124 40746	0,22µF	20%	63V	
2277	4822 124 40746	0,22µF	20%	63V	
2278	4822 121 41856	22nF	5%	250V	
2279	4822 121 41856	22nF	5%	250V	
2280	4822 124 40746	0,22µF	20%	63V	
2281	4822 124 40746	0,22µF	20%	63V	
2282	4822 121 41856	22nF	5%	250V	
2283	4822 121 41856	22nF	5%	250V	
2284	4822 126 12148	2,7nF	10%	16V	
2285	4822 126 12148	2,7nF	10%	16V	
2286	4822 122 33197	1nF	10%	50V	
2287	4822 122 33197	1nF	10%	50V	
2288	4822 124 41579	10µF	20%	50V	
2289	4822 124 41579	10µF	20%	50V	
2290	4822 124 40246	4,7µF	20%	63V	
2291	4822 124 40246	4,7µF	20%	63V	
2292	4822 124 41579	10µF	20%	50V	
2293	4822 124 40433	47µF	20%	25V	
2294	4822 124 41584	100µF	20%	10V	
2295	4822 124 41584	100µF	20%	10V	
2296	4822 124 41997	470pF	20%	10V	
2297	4822 126 12882	100nF		50V	
2298	4822 122 33197	1nF	10%	50V	
2299	4822 122 33197	1nF	10%	50V	
2300	4822 126 12882	100nF		50V	stage .6 onwards
2302	4822 121 42489	33nF	10%	25V	
2303	5322 121 42489	33nF	10%	25V	
2304	5322 122 33197	1nF	20%	16V	DBB
2304	4822 126 13312	6,8nF	20%	16V	Equal.
2305	4822 122 33197	1nF	20%	16V	DBB
2305	4822 126 13312	6,8nF	20%	16V	Equal.
2306	4822 122 33197	1nF	10%	50V	
2307	4822 122 33197	1nF	10%	50V	

COMBI Board (A3)

MISCELLANEOUS

1101	4822 277 21779	SWITCH SLIDE, FM/MW/LW
1102	4822 277 21304	SWITCH SLIDE, FM/AM
1250	4822 277 20594	SWITCH SLIDE, Rec/Pb
1251	4822 277 30689	SWITCH SLIDE, MODE
1263	4822 267 31883	SOCKET 3,5mm Jack (MICRO)
1800	4822 276 13587	SWITCH TACT
1801	4822 276 13587	SWITCH TACT
1802	4822 276 13587	SWITCH TACT
1803	4822 276 13587	SWITCH TACT
1804	4822 276 13587	SWITCH TACT
1805	4822 276 13587	SWITCH TACT
1806	4822 276 13587	SWITCH TACT
1812	4822 130 91462	LCD, FRD-13703AC
1814	4822 276 13587	SWITCH TACT
1815	4822 276 13587	SWITCH TACT

DIODES

6101	4822 130 30621	1N4148
6102	4822 130 30621	1N4148
6250	4822 130 30621	1N4148
6251	4822 130 30621	1N4148
6252	4822 130 30621	1N4148
6253	4822 130 30621	1N4148
6254	4822 130 30621	1N4148
6800	4822 130 30621	1N4148
6801	4822 130 30621	1N4148
6803	5322 130 31504	BZX79-C20
6805	4822 130 30621	1N4148

TRANSISTORS

7251	4822 130 40937	BC548B
7252	4822 130 44196	BC548C
7253	4822 130 44196	BC548C
7254	4822 130 40937	BC548B
7804	4822 130 44197	BC558B
7807	4822 130 41344	BC337-40
7810	4822 130 41344	BC337-40

INTEGRATED CIRCUITS

7101	4822 209 32746	TEA5711T/N2, RADIO IC
7250	4822 209 32918	AN7318S, Rec/Pb-AMPLIFIER IC
7800	4822 209 90494	TMP47C421ADF-AZ8050.2, µP
7801	4822 209 33339	SAA7345GP/M5, DECODER IC
7802	4822 209 32196	TDA1311AT/N2, DAC
7803	4822 209 90496	M62475FP, SERVO PROCESSOR IC
7805	4822 209 32852	TDA7073A/N2, MOTOR DRIVER IC
7806	4822 209 32852	TDA7073A/N2, SERVO DRIVER IC
7811	4822 209 90497	ST24C01CM6, EEPROM

COILS

5103	4822 157 62552	2,2µH
5104	4822 157 53302	1µH
5105	4822 156 21738	COIL VAR., MW-RF
5106	4822 156 21739	COIL VAR., LW-RF
5120	4822 157 53789	COIL VAR., FM-RF
5125	4822 156 30947	RF COIL 1,5 TURNS
5130	4822 156 21737	COIL VAR., MW-OSC.
5131	4822 156 21737	COIL VAR., LW-OSC.
5140	4822 158 60511	AM-IF FILTER 450kHz
5142	4822 157 70302	AM-IF FILTER 450kHz
5143	4822 242 81154	FILTER KIT, FM-IF
5250	4822 156 20946	OSC.COIL 100kHz

COILS

5800	4822 242 81865	CER.RES. 16,93MHz
5801	4822 242 73769	CER.RES. 4,194MHz
5802	4822 157 50964	100µH
5803	4822 157 62552	2,2µH

RESISTORS

3130	4822 116 52195	47R	5%	0,5W
3140	4822 116 52297	68k	5%	0,5W
3141	4822 100 20167	TRIMPOT. 50k lin.		
3142	4822 116 52256	2k2	5%	0,16W
3143	4822 116 52234	100k	5%	0,5W
3144	4822 050 11002	1k	5%	0,2W
3150	4822 116 52238	12k	5%	0,5W
3151	4822 116 52238	12k	5%	0,5W
3152	4822 116 52283	4k7	5%	0,5W
3153	4822 116 52283	4k7	5%	0,5W
3160	4822 116 52195	47R	5%	0,5W
3250	4822 116 52224	470R	5%	0,5W
3251	4822 116 52224	470R	5%	0,5W
3252	4822 116 52238	12k	5%	0,5W
3253	4822 116 52238	12k	5%	0,5W
3254	4822 116 52219	330R	5%	0,5W
3255	4822 116 52219	330R	5%	0,5W
3256	4822 116 52224	470R	5%	0,5W
3257	4822 116 52224	470R	5%	0,5W
3259	4822 116 52213	180R	5%	0,5W
3262	4822 116 52296	6k8	5%	0,5W
3263	4822 116 52272	330k	5%	0,5W
3265	4822 116 52245	150k	5%	0,16W
3267	4822 116 52252	180k	5%	0,5W
3268	4822 116 52191	33R	5%	0,5W
3270	4822 116 52303	8k2	5%	0,5W
3271	4822 116 52303	8k2	5%	0,5W
3272	4822 116 52211	150R	5%	0,5W
3273	4822 116 52244	15k	5%	0,5W
3275	4822 116 83864	10k	5%	0,5W
3276	4822 116 52244	15k	5%	0,5W
3277	4822 116 52244	15k	5%	0,5W
3278	4822 116 52283	4k7	5%	0,5W
3279	4822 116 52284	47k	5%	0,5W
3280	4822 116 52224	470R	5%	0,5W
3281	4822 116 52224	470R	5%	0,5W
3285	4822 116 52283	4k7	5%	0,5W
3800	4822 116 83864	10k	5%	0,5W
3802	4822 052 10828	8R2	5%	0,3W
3803	4822 116 52245	150k	5%	0,16W
3804	4822 050 11002	1k	5%	0,2W
3808	4822 050 11002	1k	5%	0,2W
3810	4822 116 52271	33k	5%	0,16W
3813	4822 116 52175	100R	5%	0,5W
3814	4822 116 52257	22k	5%	0,5W
3815	4822 116 52296	6k8	5%	0,5W
3816	4822 116 52296	6k8	5%	0,5W
3817	4822 116 52257	22k	5%	0,5W
3818	4822 116 52257	22k	5%	0,5W
3819	4822 116 52235	1M	5%	0,5W
3820	4822 116 52304	82k	5%	0,5W
3821	4822 116 52269	3k3	5%	0,5W
3823	4822 116 52244	15k	5%	0,5W
3824	4822 116 52175	100R	5%	0,5W
3825	4822 116 83882	39k	5%	0,5W
3826	4822 116 52296	6k8	5%	0,5W
3827	4822 116 52289	5k6	5%	0,16W
3828	4822 116 52244	15k	5%	0,5W

RESISTORS

3829	4822 116 83882	39k	5%	0,5W
3830	4822 116 52296	6k8	5%	0,5W
3831	4822 116 52296	6k8	5%	0,5W
3832	4822 116 83864	10k	5%	0,5W
3833	4822 116 52257	22k	5%	0,5W
3834	4822 116 52211	150R	5%	0,5W
3835	4822 116 52188	27R	5%	0,5W
3836	4822 050 11002	1k	5%	0,2W
3837	4822 111 50499	3M3	5%	0,2W
3838	4822 116 52234	100k	5%	0,5W
3839	4822 117 11825	1M5	5%	0,4W
3840	4822 050 11002	1k	5%	0,2W
3841	4822 116 52298	680k	5%	0,5W
3842	4822 116 52297	68k	5%	0,5W
3843	4822 116 52231	820R	5%	0,5W
3844	4822 116 52291	56k	5%	0,5W
3846	4822 050 11002	1k	5%	0,2W
3847	4822 116 81682	2M2	5%	0,5W
3848	4822 116 52252	180k	5%	0,5W
3850	4822 116 52283	4k7	5%	0,5W
3851	4822 116 52238	12k	5%	0,5W
3852	4822 116 52243	1k5	5%	0,16W
3853	4822 116 52303	8k2	5%	0,5W
3854	4822 116 52243	1k5	5%	0,16W
3855	4822 116 83864	10k	5%	0,5W
3856	4822 116 52271	33k	5%	0,16W
3857	4822 116 52269	3k3	5%	0,5W
3859	4822 116 83864	10k	5%	0,5W
3860	4822 116 52289	5k6	5%	0,16W
3865	4822 050 18208	8R2	1%	0,4W
3868	4822 116 52191	33R	5%	0,5W
3870	4822 116 52257	22k	5%	0,5W
3871	4822 116 52257	22k	5%	0,5W
3873	4822 116 52257	22k	5%	0,5W
3880	4822 116 52202	82R	5%	0,16W
3881	4822 116 52257	22k	5%	0,5W
3884	4822 116 83882	39k	5%	0,5W
3886	4822 116 52235	1M	5%	0,5W
3890	4822 050 11002	1k	5%	0,2W
3891	4822 050 11002	1k	5%	0,2W
3892	4822 050 11002	1k	5%	0,2W
3893	4822 050 11002	1k	5%	0,2W
3894	4822 050 11002	1k	5%	0,2W

CHIP RESISTORS

3258	4822 051 20474	470k	5%	0,1W
3260	4822 051 20273	27k	5%	0,1W
3261	4822 051 20273	27k	5%	0,1W
3264	4822 051 20154	150k	5%	0,1W
3266	4822 051 20184	180k	5%	0,1W
3269	4822 051 20475	4M7	5%	0,1W
3274	4822 051 20103	10k	5%	0,1W
3284	4822 051 20472	4k7	5%	0,1W
3286	4822 051 20339	33R	5%	0,1W
3801	4822 051 20104	100k	5%	0,1W
3805	4822 051 20008	CHIP JUMPER 0805		
3809	4822 051 20562	5k6	5%	0,1W
3811	4822 051 20105	1M	5%	0,1W
3822	4822 051 20563	56k	5%	0,1W
3845	4822 051 10102	1k	2%	0,25W
3858	4822 051 20151	150R	5%	0,1W
3861	4822 051 20223	22k	5%	0,1W
3867	4822 051 20222	2k2	5%	0,1W

CHIP RESISTORS

3869	4822 051 20472	4k7	5%	0,1W
3872	4822 051 20223	22k	5%	0,1W
3885	4822 051 20223	22k	5%	0,1W
3887	4822 051 10102	1k	2%	0,25W
3888	4822 051 10102	1k	2%	0,25W
3889	4822 051 20223	22k	5%	0,1W
3900	4822 051 20472	4k7	5%	0,1W
3901	4822 051 20472	4k7	5%	0,1W
3902	4822 051 20472	4k7	5%	0,1W
3903	4822 051 20472	4k7	5%	0,1W
3904	4822 051 20472	4k7	5%	0,1W
3905	4822 051 20472	4k7	5%	0,1W
3906	4822 051 20472	4k7	5%	0,1W
3907	4822 051 20472	4k7	5%	0,1W
3908	4822 051 20472	4k7	5%	0,1W
3909	4822 051 20472	4k7	5%	0,1W
3911	4822 051 20472	4k7	5%	0,1W
3914	4822 051 20472	4k7	5%	0,1W
3915	4822 051 20472	4k7	5%	0,1W
3916	4822 051 20472	4k7	5%	0,1W
3917	4822 051 20472	4k7	5%	0,1W
3920	4822 051 20472	4k7	5%	0,1W
3921	4822 051 20472	4k7	5%	0,1W
3922	4822 051 20472	4k7	5%	0,1W
3924	4822 051 20101	100R	5%	0,1W
3925	4822 051 20472	4k7	5%	0,1W
3926	4822 051 20472	4k7	5%	0,1W
3927	4822 051 20472	4k7	5%	0,1W
3928	4822 051 20472	4k7	5%	0,1W
4800	4822 051 10008	CHIP JUMPER 1206		
4801	4822 051 10008	CHIP JUMPER 1206		
4802	4822 051 20008	CHIP JUMPER 0805		
4803	4822 051 10008	CHIP JUMPER 1206		

CAPACITORS

2101	4822 125 50681	VARCO TUNING		
2103	4822 122 33195	100pF	10%	50V
2106	4822 125 50045	TRIMCAP. 1p8 - 20p		
2120	4822 122 33192	27pF	5%	50V
2125	4822 126 13674	27pF	5%	N330
2127	4822 126 12939	2,2pF	10%	50V
2130	4822 126 12284	5p6	5%	50V
2131	4822 126 13506	100pF	5%	50V
2132	4822 125 50045	TRIMCAP. 1p8 - 20p		
2140	4822 124 41576	2,2µF	20%	50V
2141	4822 124 41579	10µF	20%	50V
2142	4822 124 41579	10µF	20%	50V
2143	4822 126 12787	330pF	10%	50V
2144	4822 124 40746	0,22µF	20%	63V
2145	4822 124 41407	0,47µF	20%	63V
2146	4822 124 41407	0,47µF	20%	63V
2147	4822 124 40242	1µF	20%	63V
2150	4822 126 12147	22nF	10%	25V
2150	4822 126 13676	33nF	10%	25V
2151	4822 126 12147	22nF	10%	25V
2151	4822 126 13676	33nF	10%	25V
2152	4822 124 40242	1µF	20%	63V
2153	4822 124 40242	1µF	20%	63V
2160	4822 124 40433	47µF	20%	25V
2252	4822 124 41579	10µF	20%	50V
2253	4822 124 41579	10µF	20%	50V
2256	4822 121 43054	1n8	10%	50V
2257	4822 124 41579	10µF	20%	50V
2258	4822 126 10139	390pF	10%	

CAPACITORS

2260	4822 124 40184	1000µF	20%	10V
2261	4822 121 51387	10nF	20%	16V
2262	4822 122 10466	220pF	10%	
2265	4822 126 13098	5,6nF	20%	16V
2266	4822 121 51387	10nF	20%	16V
2267	4822 124 41596	22µF	20%	50V
2268	4822 124 40433	47µF	20%	25V
2269	4822 124 40433	47µF	20%	25V
2270	4822 122 33197	1nF	10%	50V
2271	4822 122 33197	1nF	10%	50V
2272	4822 121 51387	10nF	20%	16V
2273	4822 121 51387	10nF	20%	16V
2274	4822 124 40246	4,7µF	20%	63V
2276	4822 124 41596	22µF	20%	50V
2277	4822 124 40246	4,7µF	20%	63V
2278	4822 124 41596	22µF	20%	50V
2279	4822 122 33519	470pF	10%	50V
2801	4822 124 40242	1µF	20%	63V
2803	4822 126 11585	22nF		50V
2804	4822 126 12339	2,2nF	10%	16V
2805	4822 126 12882	100nF		50V
2807	4822 122 33848	47pF	5%	50V
2808	4822 124 40433	47µF	20%	25V
2809	4822 124 40242	1µF	20%	63V
2810	4822 124 40242	1µF	20%	63V
2811	4822 122 33849	150pF	10%	50V
2812	4822 122 33849	150pF	10%	50V
2814	4822 122 33195	100pF	10%	50V
2815	4822 126 12882	100nF		50V
2816	4822 124 41407	0,47µF	20%	63V
2817	4822 121 41856	22nF	5%	250V
2818	4822 124 40242	1µF	20%	63V
2819	5322 121 42386	100nF	5%	63V
2820	4822 124 40746	0,22µF	20%	63V
2821	4822 124 41576	2,2µF	20%	50V
2823	4822 124 40246	4,7µF	20%	63V
2824	4822 124 41407	0,47µF	20%	63V
2825	4822 126 13677	39pF	5%	50v
2826	4822 124 41407	0,47µF	20%	63V
2827	4822 124 40433	47µF	20%	25V
2828	4822 124 41579	10µF	20%	50V
2829	4822 121 41856	22nF	5%	250V
2830	4822 122 10319	82pF	5%	50V
2831	4822 121 41856	22nF	5%	250V
2832	4822 124 41576	2,2µF	20%	50V
2833	4822 124 40433	47µF	20%	25V
2834	4822 126 11585	22nF		50V
2835	4822 126 12882	100nF		50V
2837	4822 126 11585	22nF		50V
2839	4822 121 51387	10nF	20%	16V
2842	4822 124 40849	330µF	20%	16V
2843	4822 124 41584	100µF	20%	10V

CHIP CAPACITORS

2250	5322 122 34123	1nF	10%	50V
2251	5322 122 34123	1nF	10%	50V
2254	5322 122 32531	100pF	5%	50V
2255	5322 122 32531	100pF	5%	50V
2259	4822 122 33172	390pF	5%	50V
2263	4822 122 33575	220pF	5%	50V
2264	4822 122 32646	5,6nF	10%	50V
2275	5322 122 32654	22nF	10%	63V
2280	5322 122 34099	470pF	10%	63V
2281	5322 122 32654	22nF	10%	63V

CHIP CAPACITORS

2282	5322 122 32654	22nF	10%	63V
2802	4822 122 33496	100nF	10%	63V
2806	5322 122 32481	15pF	5%	50V
2813	4822 122 33496	100nF	10%	63V
2822	4822 122 33496	100nF	10%	63V
2836	4822 122 33496	100nF	10%	63V
2849	5322 122 34099	470pF	10%	63V
2850	5322 122 34099	470pF	10%	63V
2851	4822 122 33496	100nF	10%	63V

INFRARED EYE Board

MISCELLANEOUS

7900	4822 212 30842	TFMS5360 (IR-EYE)

INTEGRATED CIRCUITS

7901	5322 209 11147	HEF4093BT 4-fold SMITH TRIGGER

CHIP RESISTORS

3901	4822 051 20223	22k	5%	0,1W
3902	4822 051 20104	100k	5%	0,1W
3903	4822 051 20104	100k	5%	0,1W
3904	4822 051 20101	100R	5%	0,1W
3905	4822 051 20103	10k	5%	0,1W
3906	4822 051 20103	10k	5%	0,1W
4400	4822 051 20008	CHIP JUMPER 0805		
4401	4822 051 20008	CHIP JUMPER 0805		

CAPACITORS

2903	4822 124 41584	100µF	20%	10V

CHIP CAPACITORS

2901	5322 122 32268	470pF	10%	50V
2902	5322 122 32268	470pF	10%	50V
2904	5322 122 34099	470pF	10%	63V
2905	5322 122 34099	470pF	10%	63V

Compact Disc Drive RCD 1.3D

Service
Service
Service

Service Manual

COMPACT
disc
DIGITAL AUDIO

TABLE OF CONTENTS

Exchange instruction for optical pickup unit
Partslist
Service hints
Cleaning the lens

**CLASS 1
LASER PRODUCT**

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

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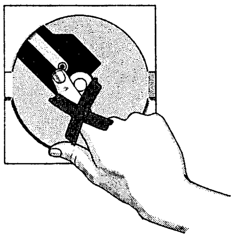
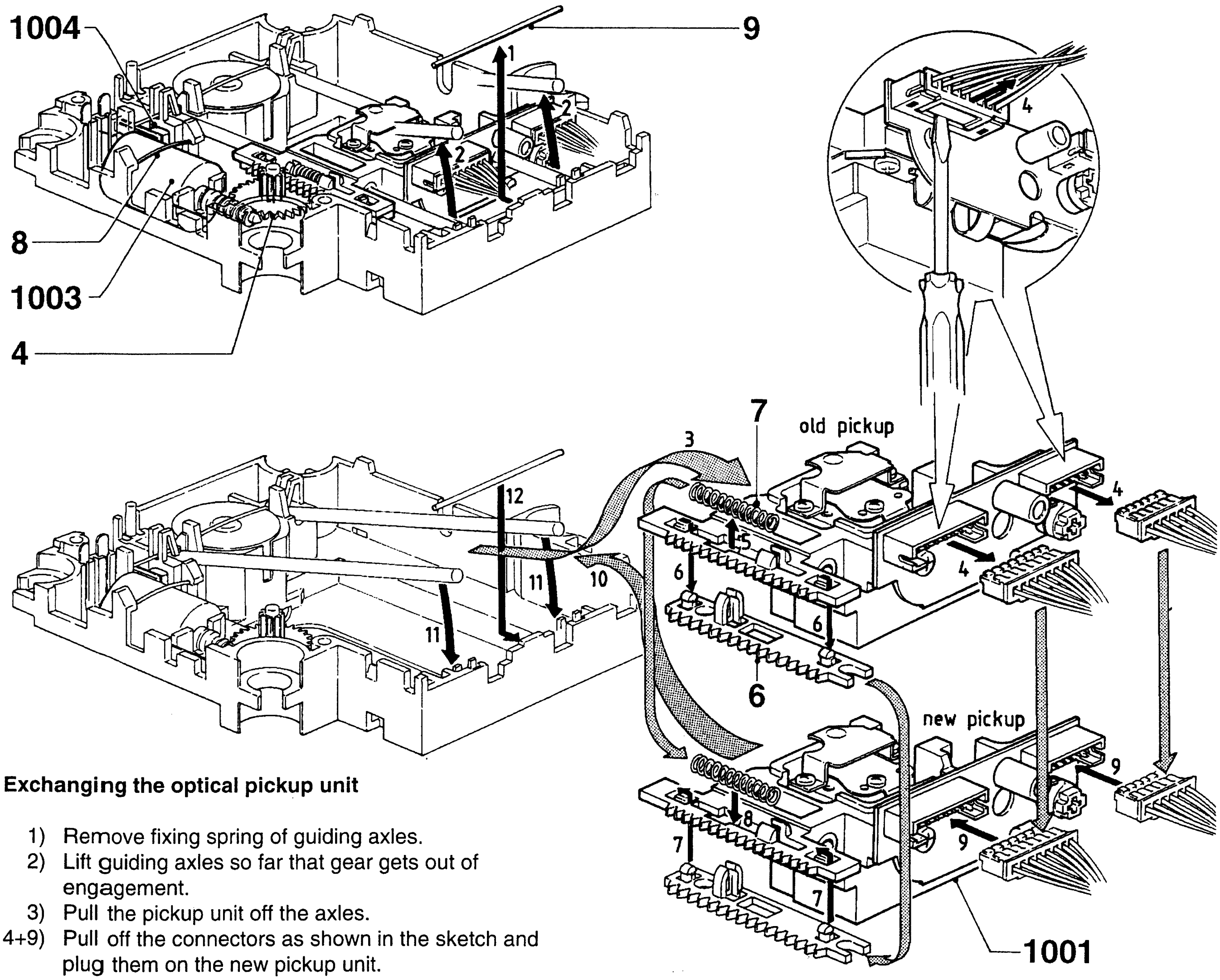
CS 48 664

Exchange instruction for the OPTICAL PICKUP unit

WARNINGS: Danger of electrostatic discharge!
The laser diode is more sensitive to ESD than MOS ICs.
Therefore take care of ESD-protection whenever working on the disc drive.

Never touch the lens!





Exchanging the optical pickup unit

1) Remove fixing spring of guiding axles.
2) Lift guiding axles so far that gear gets out of engagement.
3) Pull the pickup unit off the axles.
4+9) Pull off the connectors as shown in the sketch and plug them on the new pickup unit.
5+6) Remove the toothed bar plus compression spring.
7+8) Mount toothed bar and compression spring on new pickup unit.
10) Put the new pickup unit on the guiding axles.
11) Put guiding axles down to the chassis while positioning the pickup unit so that gear is forced easily into engagement.
12) Mount fixing spring of guiding axles.

	4822 691 30345	RCD1.3D disc drive assy
4	4822 522 32451	gear wheel
6	4822 522 32453	toothed bar
7	4822 492 51979	spring, compression
8	4822 492 63941	spring, wire (motor)
9	4822 492 63942	spring, wire (axles)
1001	4822 218 30768	optical pickup unit RCD1.3
1003	4822 361 21113	servomotor assy
1004	4822 276 12163	switch, leaf

IMPORTANT NOTE:

All electrical adjustments have to be carried out new. Follow the adjustment table of the service manual for the relevant set the disc drive is used.
The laser current has already been adjusted by the factory.

Only those parts of which a service code number is stated are service parts.

SERVICE HINTS

Service DISC - HOLDDOWN

The disc must always be fixed well on the turntable.
If the mechanism has to be dismounted for repair, a separate disc-holddown has to be used (e.g. service disc-holddown 4822 532 51871).
The CD mechanism then can function normally as in the set.

REDUCTION of REPAIR PRICE

If the disc drive does not function, in most cases the optical pickup unit will be defect.
To reduce the actual repair price it is recommended to replace the optical pickup unit only.
Follow the exchange instruction on the previous page.

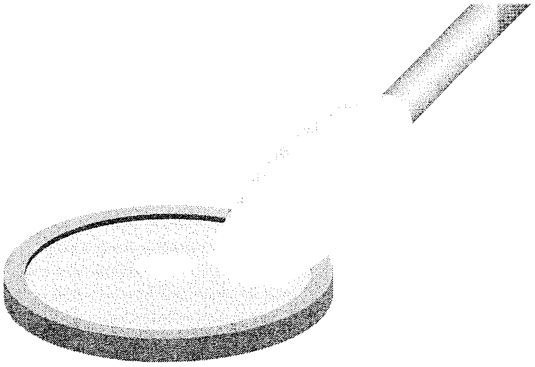
CLEANING the LENS

Principle: Avoid cleaning of the lens !

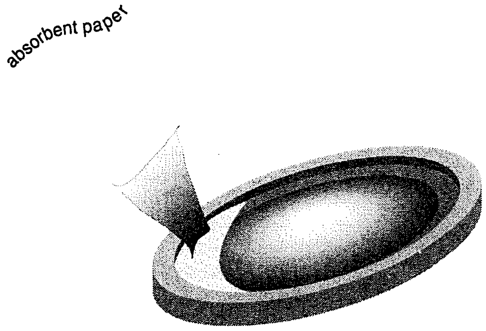
DUST particles are normally no major problem. They can be blown away with oilfree compressed air.

Finger - prints

If the lens is obviously polluted with finger - prints, it can be cleaned with alcohol or spirit.
Take a padstick and tip it into alcohol until it is soaked.
Then clean the surface of the lens by rotating the soaked padstick smoothly.
The alcohol will dissolve the finger - prints, rotation helps mechanically. Finally the lens will be filled with the dirty cleaning solvent.



Now incline the lens (disc drive) and soak the solvent up with absorbent paper.
The remnants of the solvent will evaporate.



4547

AZ8055, AZ8056, AZ8057

A95-354

Service
Service
Service

Product Service Group CE Audio

Service Information

Already published Service Informations: *none*

CHANGES IN COURSE OF PRODUCTION

COMBI - BOARD

From production week 9552 onwards layout stage .4 will be introduced.

From layout stage .4 onwards following changes are implemented:

update of partslist

2803	Polcap.	22nF	4822 121 41856
2805	Polcap.	100nF	5322 121 42386
2817	Polcap.	22nF	4822 121 41856
2829, 2831	Polcap.	22nF	4822 121 41856
3800	Resistor	22kΩ	4822 116 52257
3863	SMD jumper 0805 added		4822 051 20008
3867	deleted		
4808	SMD jumper 0805 added		4822 051 20008
7804	Transistor BC558C		5322 130 60068

change from axial components to SMDs

2834	SMD	22nF	5322 122 32654
3803	SMD	150kΩ	4822 051 20154
3840	SMD	1kΩ	4822 051 10102
3842	SMD	68kΩ	4822 116 52297

to improve shock sensitivity

2816	changed to	0,22µF	4822 124 40746
3824	changed to	150Ω	4822 116 52211
3828	changed to	10kΩ	4822 116 83864

to reduce disturbances

2139	added	10nF	4822 121 51387
2840	added	100pF	4822 122 33195
2841	added	1nF	5322 122 34123
2844	added	1nF	4822 122 33197
2852	changed to	1nF	5322 122 34123
2855	added	470pF	5322 122 34099
2856, 2857	added	10nF	4822 122 33177
3139	added	10kΩ	4822 116 83864
3853	changed to	6,8kΩ	4822 116 52296
3858	changed to	100Ω	4822 051 20101
3913	added	100kΩ	4822 051 20104
5804	added	1µH	4822 157 53302
6138, 6139	added	1N4148	4822 130 30621

to improve reliability of reset-circuit

2801	changed to	0,47µF	4822 124 41407
3801	deleted		
3804	changed to	470Ω	4822 051 20471
3806	added	15kΩ	4822 051 20153
6800	deleted		
6803	changed to	BZX79-B4v3	4822 130 31554
6806, 6807	added	1N4148	4822 130 30621
7808	added	BC548C	4822 130 44196

1995-12-11

to reduce mech. servo noise

2858	added	100pF	5322 122 32531
2859	added	2,7nF	4822 122 32627

to compensate tolerances of laser control OPAMP

3835	changed to	18Ω	4822 116 52184

For the actual Schematic Diagrams and Assembly Drawings see attached sheets 6-6, 6-7, 6-8 and 6-9.
For updated partslist see exchange sheets 9-3a, 9-4a, and 9-5a.

FEATURE/AMPLIFIER - BOARD '2'

From production week 9550 onwards layout stage .7 was introduced.

To improve *immunity to interference* with layout stage .7 following changes were implemented in the DBB-versions:

2304, 2305	changed to	1,8nF	4822 122 10576
3292, 3293	changed to	5,6kΩ	4822 116 52286
3299, 3300	changed to	1,2kΩ	4822 116 52207
3304, 3305	changed to	6,8kΩ	4822 116 52296

For the new Assembly Drawing see annexed sheet 5-1-1.

Schematic Diagram remains the same except for the version table.

Adapted version table

*Version Table for * marked components*

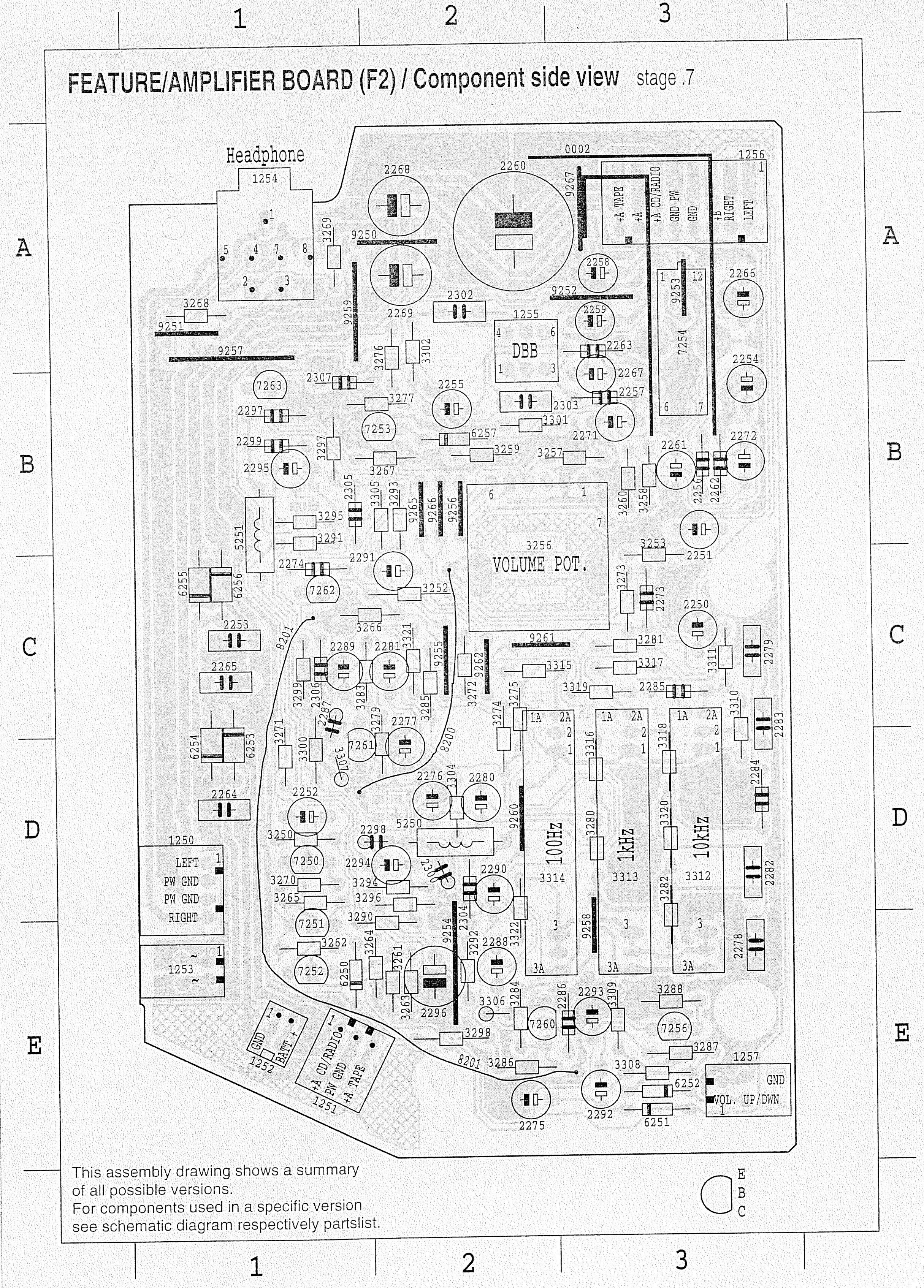
a) 3103 308 09550 (Rotary Volume Pot. + EQ) **AZ8052, AZ8062, AZ8262, AZ8282**

b) 3103 308 09830 (Volume up/dwn + DBB) **AZ8055, AZ8056, AZ8289**
3103 308 09810

c) 3103 308 09820 (Volume up/dwn + EQ) **AZ8057, AZ8068, AZ8267, AZ8277**

VERSION * ITEM	a) rot. vol. pot. + equalizer	b) vol. up/down + DBB	c) vol. up/down +equalizer
EQ	*		*
DBB		*	
Volume up/dwn		*	*
Volume Pot.	*		
2273, 2274	820p	82p	220p
2290, 2291	0,47u	4u7	4u7
2304, 2305		1n8	6n8
3259, 3260	220R	82R	150R
3266, 3267	4k7	22k	10k
3272, 3273	4k7	47k	18k
3274, 3275	820R	2k2	2k2
3292, 3293		5k6	2k7
3299, 3300		1k2	680R
3304, 3305		6k8	2k2
3310, 3311	10k		
3319, 3320	8k2		15k
3321, 3322	4k7		3k3
9260, 9261		*	

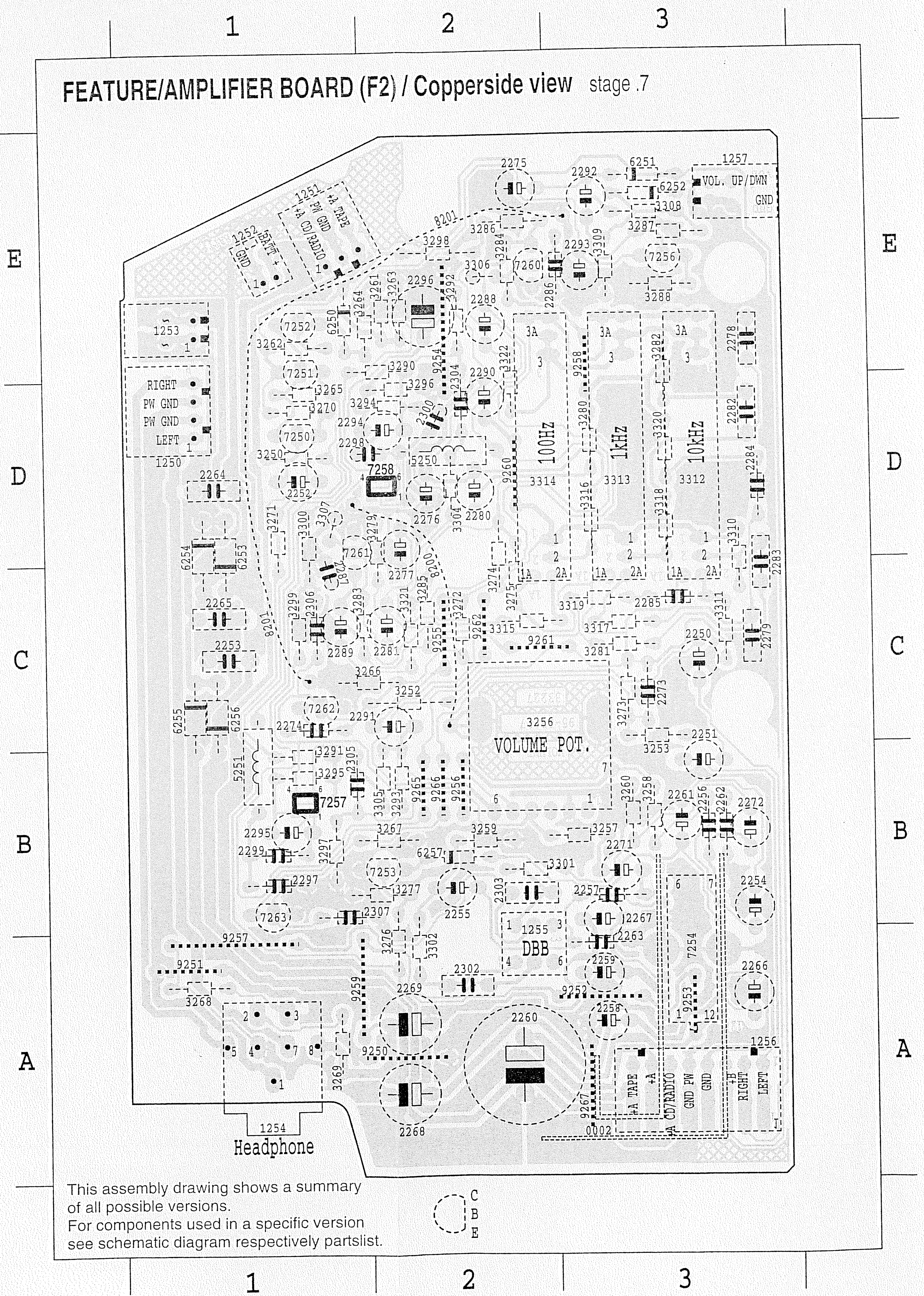
FEATURE/AMPLIFIER BOARD (F2) / Component side view stage .7


1
2
3
A
B
C
D
E
Headphone
1254
DBB
1255
VOLUME POT.
3256
100Hz
1kHz
10kHz
3314
3313
3312
+A TAPE
+A CD/RADIO
GND PW
GND
+B RIGHT
LEFT
1256
1250
LEFT
PW GND
PW GND
RIGHT
1253
1252
GND
BATT +
1251
+A CD/RADIO
PW GND
+A TAPE
1257
GND
VOL. UP/DWN
E
B
C

This assembly drawing shows a summary of all possible versions.
For components used in a specific version see schematic diagram respectively partslist.

1250	D	1	
1251	E	1	
1252	E	1	
1253	E	1	
1254	A	1	
1255	A	2	
1256	A	3	
1257	E	3	
2250	C	3	
2251	B	3	
2252	D	1	
2253	C	1	
2254	B	3	
2255	B	2	
2256	B	3	
2257	B	3	
2258	A	3	
2259	A	3	
2260	A	2	
2261	B	3	
2262	B	3	
2263	A	3	
2264	D	1	
2265	C	1	
2266	A	3	
2267	B	3	
2268	A	2	
2269	A	2	
2271	B	3	
2272	B	3	
2273	C	3	
2274	C	1	
2275	E	2	
2276	D	2	
2277	D	2	
2278	E	3	
2279	C	3	
2280	D	2	
2281	C	2	
2282	D	3	
2283	C	3	
2284	D	3	
2285	C	3	
2286	E	3	
2287	C	1	
2288	E	2	
2289	C	1	
2290	D	2	
2291	C	2	
2292	E	3	
2293	E	3	
2294	D	2	
2295	B	1	
2296	E	2	
2297	B	1	
2298	D	2	
2299	B	1	
2300	D	2	
2302	A	2	
2303	B	2	
2304	D	2	
2305	B	1	
2306	C	1	
2307	B	1	
3250	D	1	
3252	C	2	
3253	C	3	
3256	B	2	
3257	B	3	
3258	B	3	
3259	B	2	
3260	B	3	
3261	E	2	
3262	E	1	
3263	E	2	
3264	E	2	
3265	D	1	
3266	C	2	
3267	B	2	
3268	A	1	
3269	A	1	
3270	D	1	
3271	D	1	
3272	C	2	
3273	C	3	
3274	D	2	
3275	C	2	
3276	A	2	
3277	B	2	
3279	D	2	
3280	D	3	
3281	C	3	
3282	E	3	
3283	C	1	
3284	E	2	
3285	C	2	
3286	E	2	
3287	E	3	
3288	E	3	
3290	E	2	
3291	B	1	
3292	E	2	
3293	B	2	
3294	D	2	
3295	B	1	
3296	D	2	
3297	B	1	
3298	E	2	
3299	C	1	
3300	D	1	
3301	B	2	
3302	A	2	
3304	D	2	
3305	B	2	
3306	E	2	
3307	D	1	
3308	E	3	
3309	E	3	
3310	D	3	
3311	C	3	
3312	D	3	
3313	D	3	
3314	D	2	
3315	C	2	
3316	D	3	
3317	C	3	
3318	D	3	
3319	C	3	
3320	D	3	
3321	C	2	
3322	D	2	
5250	D	2	
5251	B	1	
6250	E	1	
6251	E	3	
6252	E	3	
6253	D	1	
6254	D	1	
6255	C	1	
6256	C	1	
6257	B	2	
7250	D	1	
7251	E	1	
7252	E	1	
7253	B	2	
7254	A	3	
7256	E	3	
7257	B	1	©
7258	D	2	©
7260	E	2	
7261	D	1	
7262	C	1	
7263	B	1	
8200	D	2	
8201	C	1	
9250	A	2	
9251	A	1	
9252	A	3	
9253	A	3	
9254	E	2	
9255	C	2	
9256	B	2	
9257	A	1	
9258	E	3	
9259	A	1	
9260	D	2	
9261	C	2	
9262	C	2	
9265	B	2	
9266	B	2	
9267	A	3	

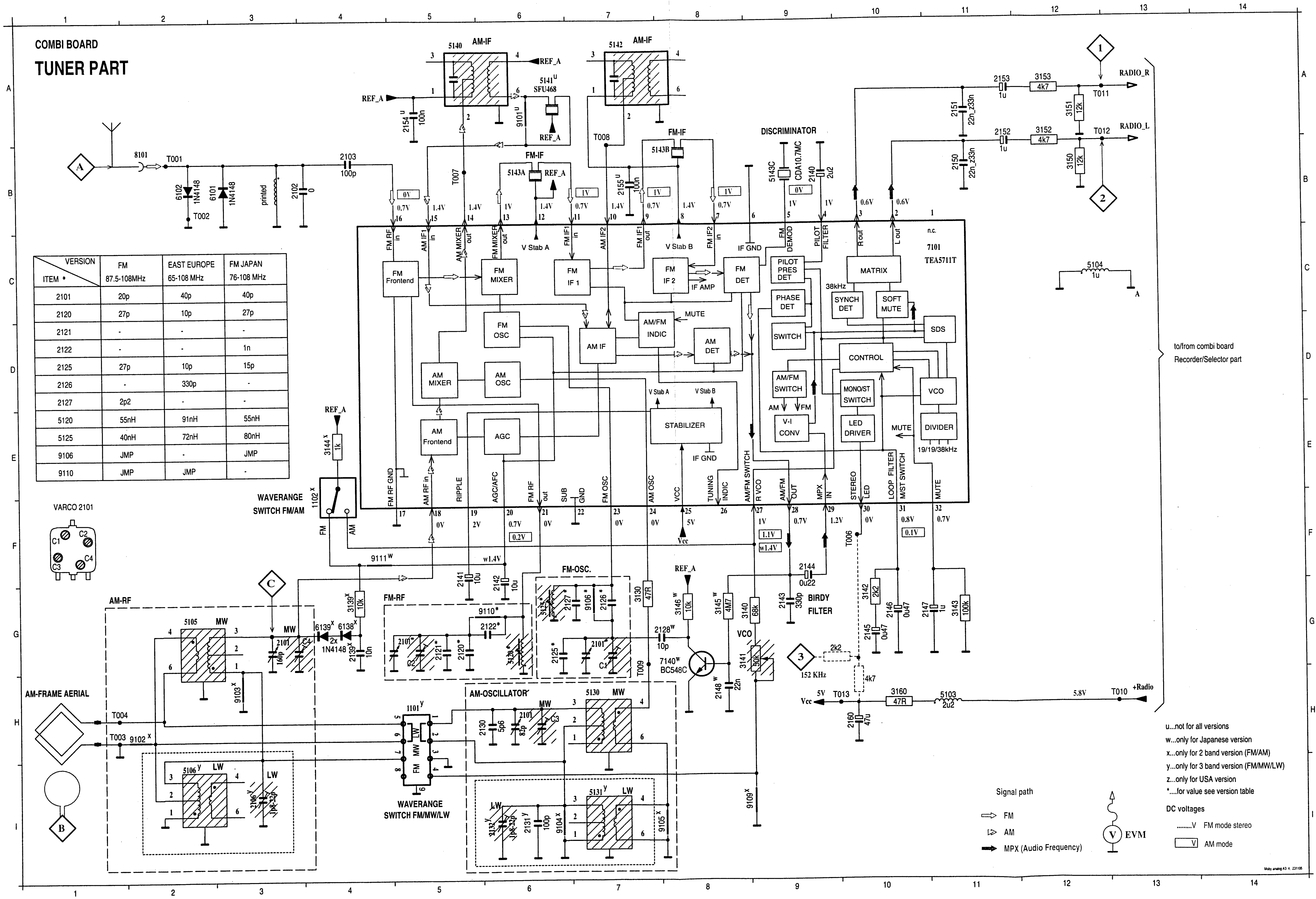
FEATURE/AMPLIFIER BOARD (F2) / Copperside view stage .7


1
2
3
E
D
C
B
A
Headphone
1254
DBB
1255
VOLUME POT.
3256
100Hz
1kHz
10kHz
3314
3313
3312
+A TAPE
+A CD/RADIO
GND PW
GND
+B RIGHT
LEFT
1256
1250
RIGHT
PW GND
PW GND
LEFT
1253
1252
GND
BATT +
1251
+A TAPE
PW GND
+A CD/RADIO
1257
VOL. UP/DWN
GND
C
B
E

This assembly drawing shows a summary of all possible versions.
For components used in a specific version see schematic diagram respectively partslist.

COMBI BOARD

TUNER PART


AM-IF
5140
5142
5141u SFU468
REF_A
9101u
2154u 100n
FM-IF
5143A
5143B
DISCRIMINATOR
5143C CDA10.7MC
2140 2u2
8101
T001
T002
T007
T008
6102 1N4148
6101 1N4148
printed
2102 0
2103 100p
2155u 100n
7101 TEA5711T
FM RF in
AM IF1 in
AM MIXER out
FM MIXER out
V Stab A
FM IF1 in
AM IF2
FM IF1 out
V Stab B
FM IF2 in
IF GND
FM DEMOD
PILOT FILTER
R out
L out
n.c.
FM Frontend
FM MIXER
FM OSC
FM IF 1
FM IF 2
IF AMP
FM DET
PILOT PRES DET
PHASE DET
SWITCH
MATRIX
38kHz
SYNCH DET
SOFT MUTE
SDS
CONTROL
AM IF
AM/FM INDIC
MUTE
AM DET
AM MIXER
AM OSC
AM Frontend
AGC
STABILIZER
IF GND
AM/FM SWITCH
AM
FM
V-I CONV
MONO/ST SWITCH
LED DRIVER
VCO
DIVIDER
19/19/38kHz
FM RF GND
AM RF in
RIPPLE
AGC/AFC
FM RF out
SUB GND
FM OSC
AM OSC
VCC
TUNING INDIC
AM/FM SWITCH
R VCO
AM/FM OUT
MPX IN
STEREO LED
LOOP FILTER
M/ST SWITCH
MUTE
2153 1u
3153 4k7
2152 1u
3152 4k7
2151 22n_z33n
2150 22n_z33n
3151 12k
3150 12k
T011
T012
RADIO_R
RADIO_L
5104 1u
to/from combi board Recorder/Selector part
REF_A
3144x 1k
WAVERANGE SWITCH FM/AM
1102x
VARCO 2101
C1
C2
C3
C4
9111w
2141 10u
2142 10u
FM-OSC.
3130 47R
3146w 10k
3145w 4M7
3140 68k
2143 330p
2144 0u22
BIRDY FILTER
T006
3142 2k2
2146 0u47
2145 0u47
2147 1u
3143 100k
AM-RF
5105 MW
6139x
6138x
2x 1N4148
3139x 10k
2139x 10n
FM-RF
9110*
2122*
2101*
2121*
2120*
5120
5125
2125*
2127
9106*
2126*
2101*
2128w 10p
7140w BC548C
VCO
3141 50k
2148w 22n
3 152 KHz
2k2
4k7
T009
AM-FRAME AERIAL
T004
T003
9102x
9103x
5106y LW
2106y
1101y
WAVERANGE SWITCH FM/MW/LW
AM-OSCILLATOR
2130 5p6
2101 82p
5130 MW
5131y LW
2132y
2131y 100p
9104x
9105x
9109x
5V
T013
Vcc
3160 47R
5103 2u2
2160 47u
5.8V
T010
+Radio
A
B
C
1
2
3
EVM
Moby analog A3 4. 231195

VERSION / ITEM *	FM 87.5-108MHz	EAST EUROPE 65-108 MHz	FM JAPAN 76-108 MHz
2101	20p	40p	40p
2120	27p	10p	27p
2121	-	-	-
2122	-	-	1n
2125	27p	10p	15p
2126	-	330p	-
2127	2p2	-	-
5120	55nH	91nH	55nH
5125	40nH	72nH	80nH
9106	JMP	-	JMP
9110	JMP	JMP	-

u...not for all versions
w...only for Japanese version
x...only for 2 band version (FM/AM)
y...only for 3 band version (FM/MW/LW)
z...only for USA version
*....for value see version table

Signal path

- ⇨ FM
- ▷ AM
- ➡ MPX (Audio Frequency)

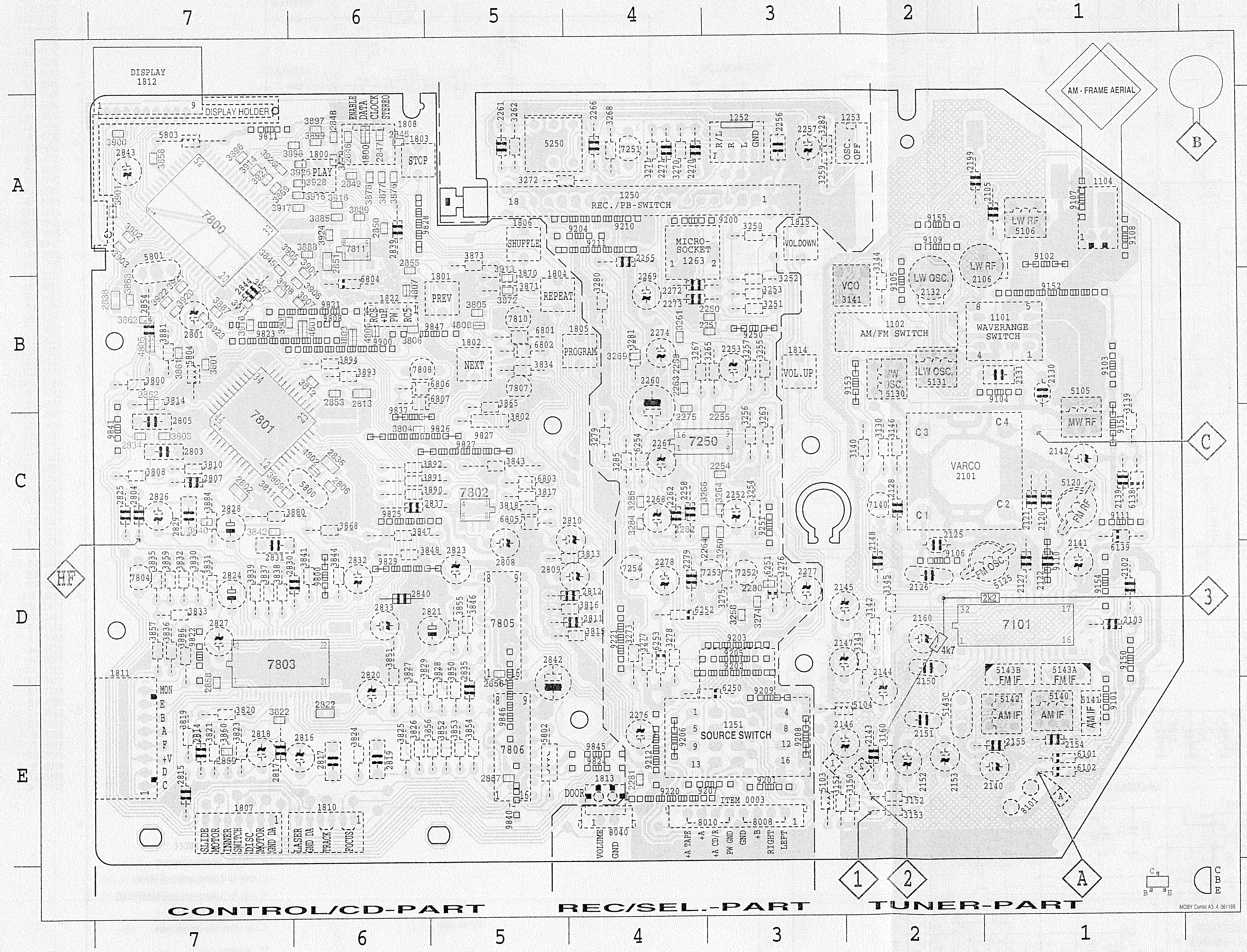
DC voltages

.........V FM mode stereo

[V] AM mode

1101	H 5
1102	F 4
1104	H 1
2101	G 7
2101	H 6
2101	G 3
2101	G 5
2102	B 3
2103	B 4
2106	I 3
2120	G 5
2121	G 5
2122	G 6
2125	G 6
2126	G 7
2127	G 6
2128	G 8
2130	H 6
2131	I 6
2132	I 6
2139	G4
2140	B 9
2141	F 5
2142	F 6
2143	G 9
2144	F 9
2145	G10
2146	G10
2147	G10
2148	H 8
2150	B11
2151	A11
2152	A11
2153	A11
2154	A 5
2155	B 7
2160	H10
3130	G 7
3139	G 4
3140	G 8
3141	G 8
3142	G10
3143	G11
3144	E 4
3145	G 8
3146	G 8
3150	B12
3151	A12
3152	A12
3153	A12
3160	H10
5103	H11
5104	C12
5105	G 2
5106	I 2
5120	G 6
5125	G 6
5130	H 7
5131	I 7
5140	A 5
5141	A 6
5142	A 7
5143A	B 6
5143B	B 8
5143C	B 9
6101	B 2
6102	B 2
6138	G4
6139	G4
7101	C11
7140	G 8
8101	B 2
9101	A 6
9102	H 2
9103	H 3
9104	I 6
9105	I 7
9106	G 7
9109	I 8
9110	G 6
9111	F 4

COMBI BOARD (A3) / Copperside view (layout stage .4)


7
6
5
4
3
2
1
A
B
C
D
E
DISPLAY 1812
DISPLAY HOLDER
PLAY
STOP
ENABLE
DATA
CLOCK
STEREO
SHUFFLE
PREV
REPEAT
NEXT
PROGRAM
MICRO-SOCKET
REC./PB-SWITCH
VOL.DOWN
VOL.UP
SOURCE SWITCH
OSC. OFF
R/L
GND
VCO
AM/FM SWITCH
WAVERANGE SWITCH
LW OSC.
LW RF
MW OSC.
MW RF
VARCO
AM-FRAME AERIAL
FM OSC
FM IF
AM IF
7800
7801
7802
7803
7805
7806
7250
7101
MON
DOOR
VOLUME
SLIDE MOTOR
INNER SWITCH
DISC MOTOR
GND DA
LASER
TRACK
FOCUS
RIGHT
LEFT
HF
CONTROL/CD-PART
REC/SEL.-PART
TUNER-PART

This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

TUNER PART

1101	B	1
1102	B	2
1104	A	1
2101	C	2
2102	D	1
2103	D	1
2105	A	1
2106	A	1
2120	C	1
2121	C	1
2122	D	1
2125	D	2
2126	D	2
2127	D	1
2128	C	2
2130	B	1
2131	B	1
2132	B	2
2139	C	1
2140	E	1
2141	D	1
2142	C	1
2143	E	2
2144	E	2
2145	D	3
2146	E	3
2147	D	3
2148	D	2
2150	D	2
2151	E	2
2152	E	2
2153	E	2
2154	E	1
2155	E	1
2160	D	2
2199	A	2
3130	C	2
3139	C	1
3140	C	2
3141	B	2
3142	D	2
3143	D	2
3144	B	2
3145	D	2
3146	C	2
3150	E	2
3151	E	3
3152	E	2
3153	E	2
3160	E	2
5103	E	3
5104	E	3
5105	C	1
5106	A	1
5120	C	1
5125	D	1
5130	B	2
5131	B	2
5140	E	1
5141	E	1
5142	E	1
5143A	D	1
5143B	D	1
5143C	E	2
6101	E	1
6102	E	1
6138	C	1
6139	C	1
7140	C	2
8101	E	1
9101	E	1
9102	A	1
9103	B	1
9104	B	1
9105	B	2
9106	D	2
9107	A	1
9108	A	1
9109	A	2
9110	D	1
9111	C	1
9150	D	1
9151	C	1
9152	B	1
9153	B	2
9154	D	1
9155	A	2

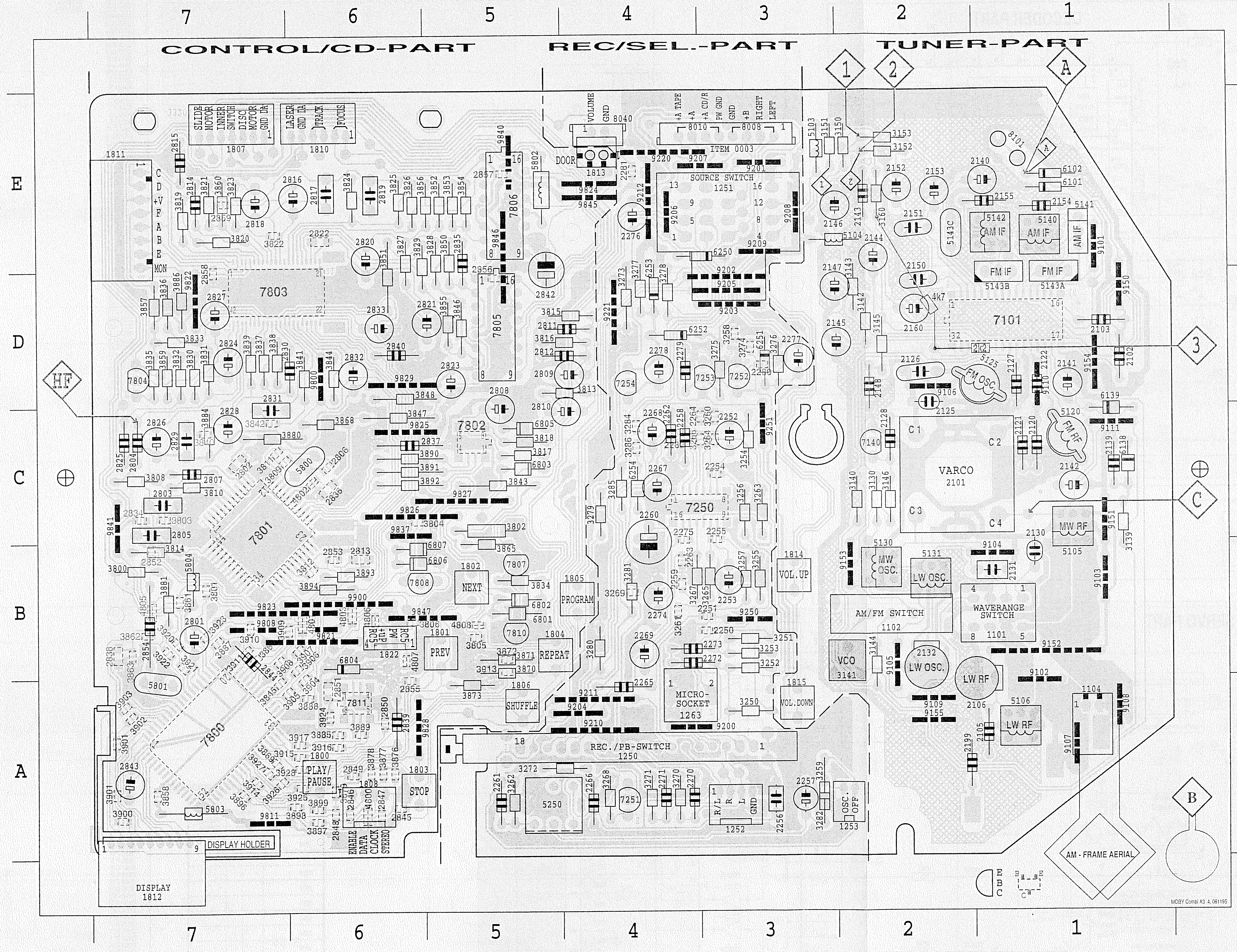
REC/SEL. PART

1250	A	4
1251	E	3
1252	A	3
1253	A	2
1263	A	4
2252	C	3
2253	B	3
2256	A	3
2257	A	3
2258	C	4
2260	B	4
2261	A	5
2262	C	4
2265	A	4
2266	A	4
2267	C	4
2268	C	4
2269	B	4
2270	A	4
2271	A	4
2272	B	4
2273	B	4
2274	B	4
2276	E	4
2277	D	3
2278	D	4
2279	D	4
3250	A	3
3251	B	3
3252	B	3
3253	B	3
3254	C	3
3255	B	3
3256	C	3
3257	B	3
3259	A	3
3262	A	5
3263	C	3
3265	B	3
3267	B	4
3268	A	4
3270	A	4
3271	A	4
3272	A	4
3273	D	4
3275	D	3
3276	D	3
3277	D	4
3278	D	4
3279	C	4
3280	B	4
3281	B	4
3282	A	3
3285	C	4
5250	A	5
6250	E	3
6251	D	3
6252	D	4
6253	D	4
6254	C	4
7251	A	4
7252	D	3
7253	D	3
7254	D	4
8008	E	3
8040	E	4
9200	A	4
9201	E	3
9202	D	3
9203	D	3
9204	A	4
9205	D	3
9206	E	4
9207	E	3
9208	E	3
9209	E	3
9210	A	4
9211	A	4
9212	E	4
9220	E	4
9221	D	4
9250	B	3
9251	C	3

CONTROL/CD-PART

1800	A	6
1801	B	5
1802	B	5
1803	A	6
1804	B	5
1805	B	4
1806	A	5
1807	E	7
1808	A	6
1810	E	6
1811	E	7
1812	A	7
1813	E	4
1814	B	3
1815	A	3
1822	B	6
2801	B	7
2803	C	7
2804	C	7
2805	C	7
2807	C	7
2808	C	5
2809	D	4
2810	C	4
2811	D	4
2812	D	4
2814	E	7
2815	E	7
2816	E	6
2817	E	6
2818	E	7
2819	E	6
2820	E	6
2821	D	5
2823	D	5
2824	D	7
2825	C	7
2826	C	7
2827	D	7
2828	C	7
2829	C	7
2830	D	6
2831	C	7
2832	D	6
2833	D	6
2835	E	5
2837	C	6
2839	A	6
2840	D	6
2842	E	5
2843	A	7
2844	B	7
2854	B	7
3800	B	7
3802	C	5
3808	C	7
3810	C	7
3813	D	4
3814	B	7
3815	D	4
3816	D	4
3817	C	5
3818	C	5
3819	E	7
3820	E	7
3821	E	7
3823	E	7
3824	E	6
3825	E	6
3826	E	6
3827	E	6
3828	E	5
3829	E	6
3830	D	7
3831	D	7
3832	D	7
3833	D	7
3834	B	5
3835	D	7
3836	D	7
3837	D	7
3838	D	7
3839	D	7
3841	D	6
3843	C	5
3844	D	6
3846	D	5
3847	C	6
3848	D	6
3850	E	5
3851	D	6
3852	E	5
3853	E	5
3854	E	5
3855	D	5
3856	E	5
3857	D	7
3859	D	7
3860	E	7
3865	B	5
3868	C	6
3870	B	5
3871	B	5
3873	A	5
3880	C	7
3881	B	7
3884	C	7
3886	D	7
3890	C	6
3891	C	6
3892	C	6
3893	B	6
3894	B	6
5800	C	7
5801	A	7
5802	E	5
5803	A	7
5804	B	7
6801	B	5
6802	B	5
6803	C	5
6804	B	6
6805	C	5
6806	B	6
6807	B	6
7804	D	7
7805	D	5
7806	E	5
7807	B	5
7808	B	6
7810	B	5
9800	D	6
9808	B	7
9811	A	7
9821	B	6
9822	D	7
9823	B	7
9824	E	4
9825	C	6
9826	C	6
9827	C	5
9828	A	6
9829	D	6
9837	C	6
9840	E	5
9841	C	7
9845	E	4
9846	E	5
9847	B	6
9900	B	6
2250	B	3
2251	B	3
2254	C	3
2255	C	3
2259	B	4
2263	B	4
2264	C	3
2275	C	4
2280	D	3
2281	E	4
2282	C	4
2802	C	7
2806	C	6
2813	B	6
2822	E	6
2834	C	7
2836	C	6
2838	B	7
2841	B	6
2845	A	6
2846	A	6
2847	A	6
2848	A	6
2849	A	6
2850	A	6
2851	A	6
2852	B	7
2853	B	6
2855	A	6
2856	D	5
2857	E	5
2858	D	7
2859	E	7
3258	D	3
3260	C	3
3261	B	4
3264	C	3
3266	C	3
3269	B	4
3274	D	3
3284	C	4
3286	C	4
3801	B	7
3803	C	7
3804	C	6
3805	B	5
3806	B	6
3809	C	7
3811	C	7
3812	B	6
3822	E	7
3840	C	7
3842	C	7
3845	A	7
3858	A	7
3861	B	7
3862	B	7
3863	B	7
3867	B	7
3869	A	7
3872	B	5
3876	A	6
3877	A	6
3878	A	6
3879	A	6
3885	A	6
3887	B	7
3888	A	6
3889	A	6
3896	A	7
3897	A	6
3898	A	6
3899	A	6
3900	A	7
3901	A	7
3902	A	7
3903	A	7
3904	A	6
3905	A	7
3906	B	6
3907	B	6
3908	B	7
3909	B	7
3910	B	7
3911	B	7
3913	B	5
3914	A	7
3915	A	6
3916	A	6
3917	A	6
3920	B	7
3921	B	7
3922	B	7
3923	B	7
3924	A	6
3925	A	6
3926	A	7
3927	A	7
3928	A	6
4800	A	6
4801	B	6
4802	C	6
4803	B	6
4805	B	7
4806	B	6
4807	B	6
4808	B	5
7101	D	1
7250	C	4
7800	A	7
7801	C	7
7802	C	5
7803	D	7
7811	A	6

COMBI BOARD (A3) / Component side view (layout stage .4)



This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

TUNER PART

1101	B	1
1102	B	2
1104	A	1
2101	C	2
2102	D	1
2103	D	1
2105	A	1
2106	A	1
2120	C	1
2121	C	1
2122	D	1
2125	D	2
2126	D	2
2127	D	1
2128	C	2
2130	B	1
2131	B	1
2132	B	2
2139	C	1
2140	E	1
2141	D	1
2142	C	1
2143	E	2
2144	E	2
2145	D	3
2146	E	3
2147	D	3
2148	D	2
2150	D	2
2151	E	2
2152	E	2
2153	E	2
2154	E	1
2155	E	1
2160	D	2
2199	A	2
3130	C	2
3139	C	1
3140	C	2
3141	B	2
3142	D	2
3143	D	2
3144	B	2
3145	D	2
3146	C	2
3150	E	2
3151	E	3
3152	E	2
3153	E	2
3160	E	2
5103	E	3
5104	E	3
5105	C	1
5106	A	1
5120	C	1
5125	D	1
5130	B	2
5131	B	2
5140	E	1
5141	E	1
5142	E	1
5143A	D	1
5143B	D	1
5143C	E	2
6101	E	1
6102	E	1
6138	C	1
6139	C	1
7140	C	2
8101	E	1
9101	E	1
9102	A	1
9103	B	1
9104	B	1
9105	B	2
9106	D	2
9107	A	1
9108	A	1
9109	A	2
9110	D	1
9111	C	1
9150	D	1
9151	C	1
9152	B	1
9153	B	2
9154	D	1
9155	A	2

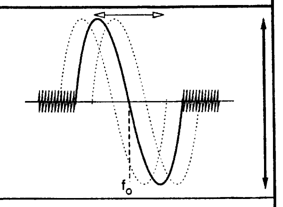
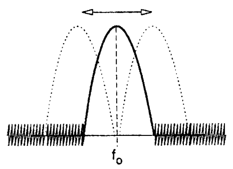
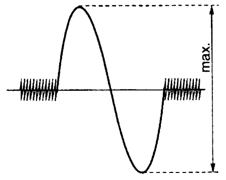
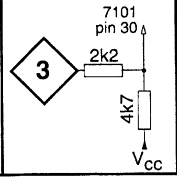
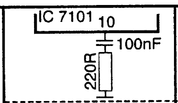
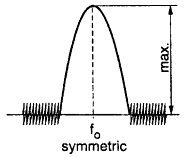
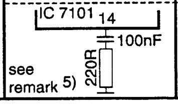
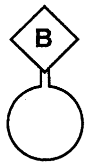
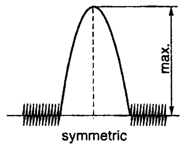
REC/SEL. PART

1250	A	4
1251	E	3
1252	A	3
1253	A	2
1263	A	4
2252	C	3
2253	B	3
2256	A	3
2257	A	3
2258	C	4
2260	B	4
2261	A	5
2262	C	4
2265	A	4
2266	A	4
2267	C	4
2268	C	4
2269	B	4
2270	A	4
2271	A	4
2272	B	4
2273	B	4
2274	B	4
2276	E	4
2277	D	3
2278	D	4
2279	D	4
3250	A	3
3251	B	3
3252	B	3
3253	B	3
3254	C	3
3255	B	3
3256	C	3
3257	B	3
3259	A	3
3262	A	5
3263	C	3
3265	B	3
3267	B	4
3268	A	4
3270	A	4
3271	A	4
3272	A	4
3273	D	4
3275	D	3
3276	D	3
3277	D	4
3278	D	4
3279	C	4
3280	B	4
3281	B	4
3282	A	3
3285	C	4
5250	A	5
6250	E	3
6251	D	3
6252	D	4
6253	D	4
6254	C	4
7251	A	4
7252	D	3
7253	D	3
7254	D	4
8008	E	3
8040	E	4
9200	A	4
9201	E	3
9202	D	3
9203	D	3
9204	A	4
9205	D	3
9206	E	4
9207	E	3
9208	E	3
9209	E	3
9210	A	4
9211	A	4
9212	E	4
9220	E	4
9221	D	4
9250	B	3
9251	C	3

CONTROL/CD-PART

1800	A	6
1801	B	5
1802	B	5
1803	A	6
1804	B	5
1805	B	4
1806	A	5
1807	E	7
1808	A	6
1810	E	6
1811	E	7
1812	A	7
1813	E	4
1814	B	3
1815	A	3
1822	B	6
2801	B	7
2803	C	7
2804	C	7
2805	C	7
2807	C	7
2808	C	5
2809	D	4
2810	C	4
2811	D	4
2812	D	4
2814	E	7
2815	E	7
2816	E	6
2817	E	6
2818	E	7
2819	E	6
2820	E	6
2821	D	5
2823	D	5
2824	D	7
2825	C	7
2826	C	7
2827	D	7
2828	C	7
2829	C	7
2830	D	6
2831	C	7
2832	D	6
2833	D	6
2835	E	5
2837	C	6
2839	A	6
2840	D	6
2842	E	5
2843	A	7
2844	B	7
2854	B	7
3800	B	7
3802	C	5
3808	C	7
3810	C	7
3813	D	4
3814	B	7
3815	D	4
3816	D	4
3817	C	5
3818	C	5
3819	E	7
3820	E	7
3821	E	7
3823	E	7
3824	E	6
3825	E	6
3826	E	6
3827	E	6
3828	E	5
3829	E	6
3830	D	7
3831	D	7
3832	D	7
3833	D	7
3834	B	5
3835	D	7
3836	D	7
3837	D	7
3838	D	7
3839	D	7
3841	D	6
3843	C	5
3844	D	6
3846	D	5
3847	C	6
3848	D	6
3850	E	5
3851	D	6
3852	E	5
3853	E	5
3854	E	5
3855	D	5
3856	E	5
3857	D	7
3859	D	7
3860	E	7
3865	B	5
3868	C	6
3870	B	5
3871	B	5
3873	A	5
3880	C	7
3881	B	7
3884	C	7
3886	D	7
3890	C	6
3891	C	6
3892	C	6
3893	B	6
3894	B	6
5800	C	7
5801	A	7
5802	E	5
5803	A	7
5804	B	7
6801	B	5
6802	B	5
6803	C	5
6804	B	6
6805	C	5
6806	B	6
6807	B	6
7804	D	7
7805	D	5
7806	E	5
7807	B	5
7808	B	6
7810	B	5
9800	D	6
9808	B	7
9811	A	7
9821	B	6
9822	D	7
9823	B	7
9824	E	4
9825	C	6
9826	C	6
9827	C	5
9828	A	6
9829	D	6
9837	C	6
9840	E	5
9841	C	7
9845	E	4
9846	E	5
9847	B	6
9900	B	6
2250	B	3
2251	B	3
2254	C	3
2255	C	3
2259	B	4
2263	B	4
2264	C	3
2275	C	4
2280	D	3
2281	E	4
2282	C	4
2802	C	7
2806	C	6
2813	B	6
2822	E	6
2834	C	7
2836	C	6
2838	B	7
2841	B	6
2845	A	6
2846	A	6
2847	A	6
2848	A	6
2849	A	6
2850	A	6
2851	A	6
2852	B	7
2853	B	6
2855	A	6
2856	D	5
2857	E	5
2858	D	7
2859	E	7
3258	D	3
3260	C	3
3261	B	4
3264	C	3
3266	C	3
3269	B	4
3274	D	3
3284	C	4
3286	C	4
3801	B	7
3803	C	7
3804	C	6
3805	B	5
3806	B	6
3809	C	7
3811	C	7
3812	B	6
3822	E	7
3840	C	7
3842	C	7
3845	A	7
3858	A	7
3861	B	7
3862	B	7
3863	B	7
3867	B	7
3869	A	7
3872	B	5
3876	A	6
3877	A	6
3878	A	6
3879	A	6
3885	A	6
3887	B	7
3888	A	6
3889	A	6
3896	A	7
3897	A	6
3898	A	6
3899	A	6
3900	A	7
3901	A	7
3902	A	7
3903	A	7
3904	A	6
3905	A	7
3906	B	6
3907	B	6
3908	B	7
3909	B	7
3910	B	7
3911	B	7
3913	B	5
3914	A	7
3915	A	6
3916	A	6
3917	A	6
3920	B	7
3921	B	7
3922	B	7
3923	B	7
3924	A	6
3925	A	6
3926	A	7
3927	A	7
3928	A	6
4800	A	6
4801	B	6
4802	C	6
4803	B	6
4805	B	7
4806	B	6
4807	B	6
4808	B	5
7101	D	1
7250	C	4
7800	A	7
7801	C	7
7802	C	5
7803	D	7
7811	A	6

TUNER ADJUSTMENT TABLE

Waverange	Input Frequency	Input	Set tuned to	Adjust	Measure on	Scope / Counter
OSCILLATOR						
FM 87,5 - 108 MHz (65 - 108 MHz) 1) [76 - 108 MHz] 2)	87,35 MHz (64,7 MHz) [75,7 MHz]	A Δf = ±500kHz V_{RF} = 100µV	lower band end	5125	1 or 2	 ↕
	108,25 MHz		upper band end	2101 C1		
MW 525 - 1607 kHz (530 - 1710 kHz) 3)	512 kHz (520 kHz)	C Δf = ±30kHz V_{RF} = 100µV	lower band end	5130	1 or 2	 ↕
	1635 kHz (1730 kHz)		upper band end	2101 C3		
LW 4) 148,5 - 284 kHz	147 kHz		lower band end	5131		↕
	291 kHz		upper band end	2132		
FM - RF						
FM 87,5 - 108 MHz (65 - 108 MHz) 1) [76 - 108 MHz] 2)	87,5 MHz (65 MHz) [76 MHz]	A Δf = ±500kHz V_{RF} = 10µV	87,5 MHz (65 MHz) [76 MHz]	5120	1 or 2	 ↕
	108 MHz		108 MHz	2101 C2		
VCO						
FM	98 MHz	A continuous wave V_{RF} = 1 mV	98 MHz	3141		152 ±1 kHz
AM - IF						
AM	468 kHz connect pin 24 of IC 7101 (AM Osc) with short wire to ground	C Δf = ±15kHz V_{RF} = 10mV		5140	1 or 2	
			 see remark 5)	5142		
AM -RF						
MW	560 kHz	 Δf = ±30kHz V_{RF} as low as possible	560 kHz	5105	1 or 2	 ↕
	1500 kHz		1500 kHz	2101 C4		
LW 4)	170 kHz		170 kHz	5106		↕
	260 kHz		260 kHz	2106		

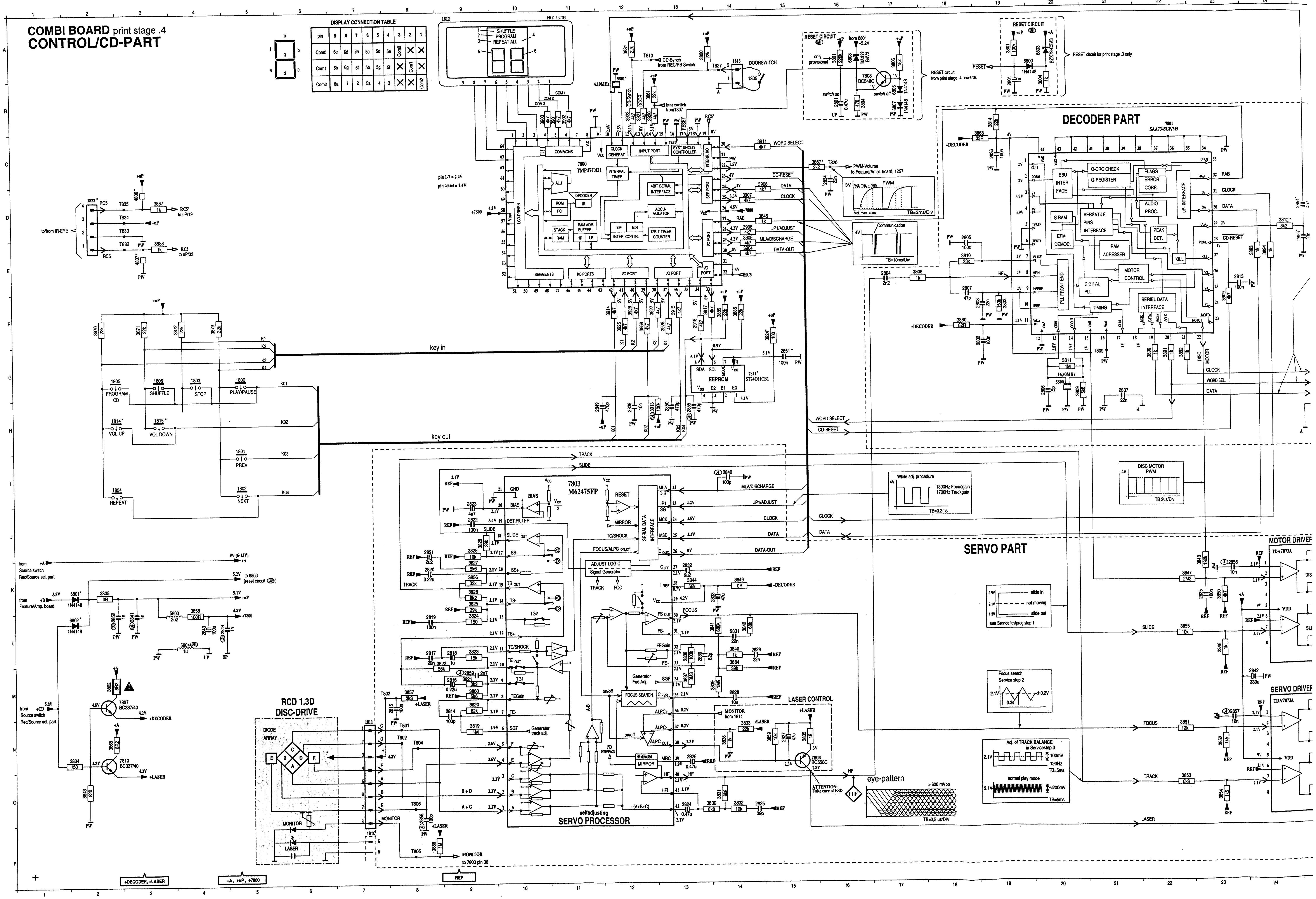
Tuner Adj. Moby Analog 15.3.95

↕ repeat

1) for East Europe /14 2) for Japan /06 3) for USA /17 4) LW not for all versions

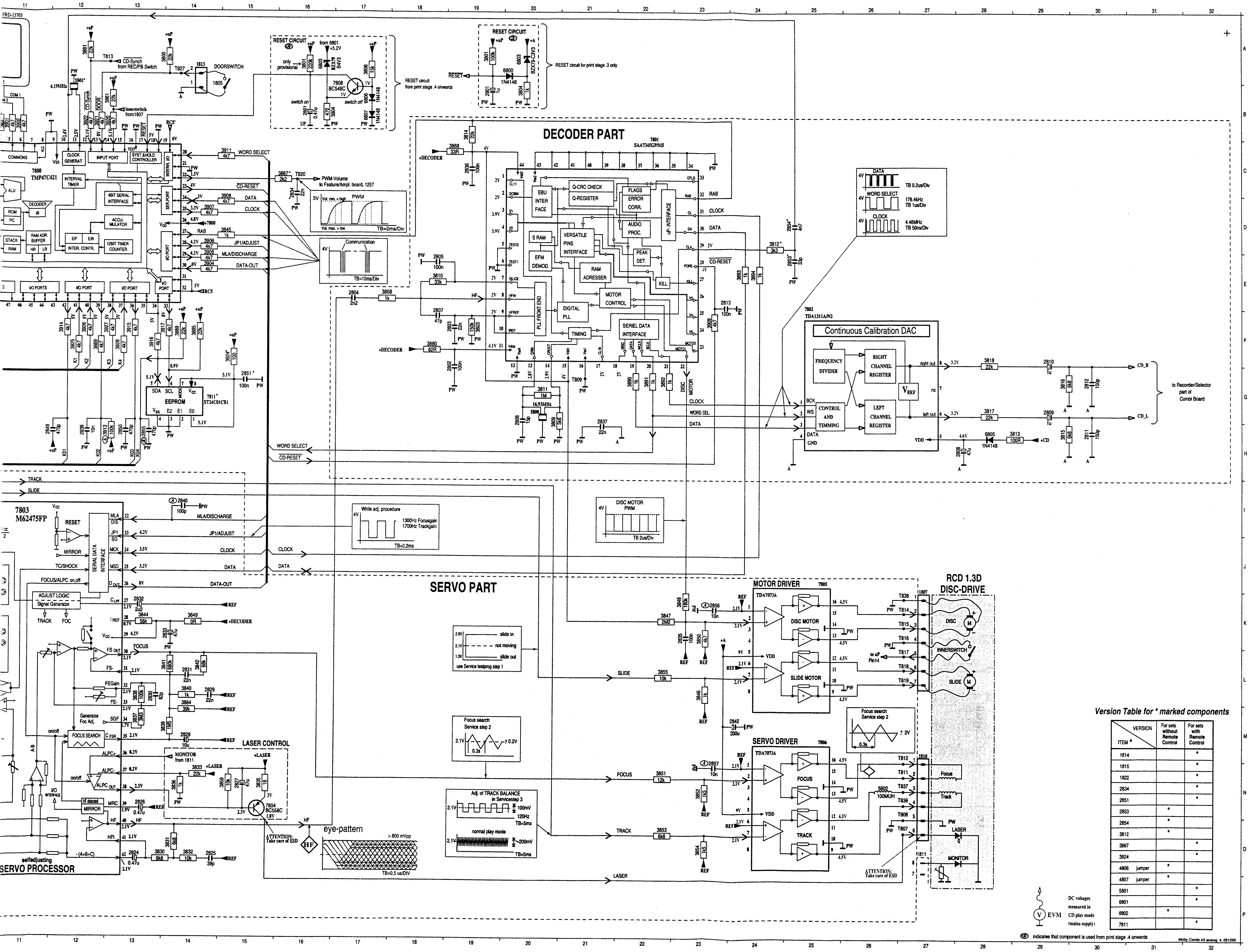
5) RC-network serves for damping the IF-filter while adjusting the other one.

COMBI BOARD print stage .4
CONTROL/CD-PART


DISPLAY CONNECTION TABLE
1812
FRD-13703
SHUFFLE
PROGRAM
REPEAT ALL
7800
TMP47C421
COMMONS
CLOCK GENERAT.
INPUT PORT
SYST.&HOLD CONTROLLER
INTERVAL TIMER
ALU
DECODER
ROM
PC
RAM ADR. BUFFER
STACK
RAM
4BIT SERIAL INTERFACE
ACCU-MULATOR
12BIT TIMER COUNTER
INTER. CONTR.
LCD-DRIVER
SER PORT
I/O PORT
SEGMENTS
I/O PORTS
4.19MHz
DOORSWITCH
CD-Synch from REC/PB Switch
innerswitch from1807
WORD SELECT
CD-RESET
DATA
CLOCK
RAB
JP1/ADJUST
MLA/DISCHARGE
DATA-OUT
pin 1-7 = 2.4V
pin 43-64 = 2.4V
RESET CIRCUIT ④
only provisional
switch on
switch off
BC548C
1N4148
RESET circuit from print stage .4 onwards
RESET CIRCUIT ③
RESET circuit for print stage .3 only
BZX79-C3V3
PWM-Volume to Feature/Ampl. board, 1257
PWM
Vol. min. + high
Vol. max. = low
TB=2ms/Div
Communication
TB=10ms/Div
DECODER PART
7801
SAA7345GP/M5
EBU INTER FACE
Q-CRC CHECK
Q-REGISTER
FLAGS ERROR CORR.
AUDIO PROC.
µP- INTERFACE
S RAM
VERSATILE PINS INTERFACE
EFM DEMOD.
RAM ADRESSER
PEAK DET.
KILL
MOTOR CONTROL
DIGITAL PLL
PLL FRONT END
TIMING
SERIEL DATA INTERFACE
16.93MHz
EEPROM
7811
ST24C01CB1
key in
key out
PROGRAM CD
SHUFFLE
STOP
PLAY/PAUSE
VOL UP
VOL DOWN
PREV
REPEAT
NEXT
to/from IR-EYE
to uP/19
to uP/32
from Source switch Rec/Source sel. part
from Feature/Amp. board
to 6803 (reset circuit ④)
9V (6-13V)
7807 BC337/40
7810 BC337/40
+DECODER
+LASER
TRACK
SLIDE
7803
M62475FP
BIAS
RESET
MIRROR
SERIAL DATA INTERFACE
TC/SHOCK
FOCUS/ALPC on/off
ADJUST LOGIC Signal Generator
DET.FILTER
FOCUS SEARCH
Generator Foc Adj.
Generator track adj.
selfadjusting SERVO PROCESSOR
LASER CONTROL
MONITOR from 1811
7804 BC558C
ATTENTION: Take care of ESD
eye-pattern
> 800 mVpp
TB=0,5 us/DIV
RCD 1.3D DISC-DRIVE
DIODE ARRAY
MONITOR
LASER
MONITOR to 7803 pin 36
While adj. procedure
1300Hz Focusgain
1700Hz Trackgain
TB=0.2ms
DISC MOTOR PWM
TB 2us/Div
SERVO PART
slide in
not moving
slide out
use Service testprog step 1
Focus search Service step 2
Adj. of TRACK BALANCE in Servicestep 3
100mV
120Hz
TB=5ms
normal play mode
~200mV
TB=5ms
MOTOR DRIVER
TDA7073A
SERVO DRIVER
TDA7073A
FOCUS
LASER
+DECODER, +LASER
+A , +uP , +7800
REF

DISPLAY CONNECTION TABLE

pin	9	8	7	6	5	4	3	2	1
Com0	6c	6d	6e	5c	5d	5e	Com0	X	X
Com1	6b	6g	6f	5b	5g	5f	X	Com1	X
Com2	6a	1	2	5a	4	3	X	X	Com2


FRD-13703
7800
TMP47C421
RESET CIRCUIT
RESET circuit from print stage .4 onwards
RESET CIRCUIT
RESET circuit for print stage .3 only
DOORSWITCH
Innerswitch from1807
CD-Synch from REC/PB Switch
DECODER PART
7801
SAA7345GP/M5
EBU INTERFACE
Q-CRC CHECK
Q-REGISTER
FLAGS
ERROR CORR.
AUDIO PROC.
µP- INTERFACE
S RAM
VERSATILE PINS INTERFACE
EFM DEMOD.
RAM ADRESSER
PEAK DET.
KILL
MOTOR CONTROL
DIGITAL PLL
PLL FRONT END
TIMING
SERIEL DATA INTERFACE
16,93MHz
PWM-Volume to Feature/Ampl. board, 1257
PWM
TB=2ms/Div
Communication
TB=10ms/Div
DATA
WORD SELECT
CLOCK
TB 0.2us/Div
176.4kHz TB 1us/Div
4.46MHz TB 50ns/Div
7802
TDA1311A/N2
Continuous Calibration DAC
FREQUENCY DIVIDER
RIGHT CHANNEL REGISTER
LEFT CHANNEL REGISTER
CONTROL AND TIMMING
VREF
CD_R
CD_L
to Recorder/Selector part of Combi Board
EEPROM
7811*
ST24C01CB1
WORD SELECT
CD-RESET
TRACK
SLIDE
7803
M62475FP
SERIAL DATA INTERFACE
ADJUST LOGIC
Signal Generator
While adj. procedure
1300Hz Focusgain
1700Hz Trackgain
TB=0.2ms
DISC MOTOR PWM
TB 2us/Div
SERVO PART
MOTOR DRIVER
7805
TDA7073A
DISC MOTOR
SLIDE MOTOR
SERVO DRIVER
7806
TDA7073A
FOCUS
TRACK
RCD 1.3D DISC-DRIVE
DISC
INNERSWITCH
SLIDE
Focus
Track
LASER
MONITOR
slide in
not moving
slide out
use Service testprog step 1
Focus search Service step 2
Adj. of TRACK BALANCE in Servicestep 3
normal play mode
TB=5ms
LASER CONTROL
7804
BC558C
ATTENTION: Take care of ESD
eye-pattern
> 800 mVpp
TB=0.5 us/DIV
selfadjusting
SERVO PROCESSOR
FOCUS SEARCH
FOCUS
SLIDE
TRACK
LASER

1800	G 5
1801	I 5
1802	I 5
1803	G 4
1804	I 2
1805	G 2
1806	G 3
1807	J27
1810	M27
1811	N 7
1812	A 9
1813	A14
1814	H 2
1815	H 3
1822	D 2
2801	B16
2802	G19
2803	F19
2804	E17
2805	E18
2806	G20
2807	F18
2808	H28
2809	G29
2810	F29
2811	H30
2812	G30
2813	E23
2814	M 9
2815	M 8
2816	M 9
2817	L 8
2818	L 9
2819	L 8
2820	K 8
2821	J 8
2822	J 9
2823	J 9
2824	O13
2825	O14
2826	N13
2827	N15
2828	M14
2829	L14
2830	L13
2831	L14
2832	K13
2833	K14
2834	C16
2835	K23
2836	C19
2837	H21
2839	H12
2840	I14
2841	L 3
2842	M24
2843	L 4
2844	L 4
2849	H11
2850	H13
2851	G15
2852	L 2
2853	E25
2854	D25
2855	H13
2856	K23
2857	N23
2858	O 7
2859	M 9
3800	A13
3801	A16
3802	M 2
3803	F19
3804	B16
3805	K 2
3806	A 17
3808	E17
3809	G20
3810	E18
3811	G20
3812	D24
3813	H29
3814	B19
3815	H29
3816	G29
3817	G28
3818	F28
3819	N 9
3820	M 9
3821	M 9
3822	M 9
3823	L 9
3824	L 9
3825	K 9
3826	K 9
3827	K 9
3828	J 9
3829	J 9
3830	O13
3831	O14
3832	O14
3833	N14
3834	N 2
3835	N15
3836	N14
3837	M13
3838	L13
3839	M14
3840	L14
3841	L14
3842	L14
3843	O 2
3844	K13
3845	D15
3846	L23
3847	K22
3848	K23
3849	K14
3850	K23
3851	N22
3852	N23
3853	O22
3854	O23
3855	L22
3856	K 9
3857	M 8
3858	L 4
3859	N15
3860	M 9
3861	B12
3865	N 2
3867	C16
3868	C19
3869	F12
3870	F 2
3871	F 3
3872	F 4
3873	F 4
3880	F18
3881	A12
3884	M14
3885	F14
3886	P 8
3887	D 3
3888	E 3
3889	F14
3890	G22
3891	G22
3892	G22
3893	E24
3894	E24
3900	B11
3901	B11
3902	B11
3904	E14
3905	E14
3906	D14
3907	D14
3908	D15
3909	F23
3911	C15
3913	H13
3914	F12
3915	F13
3916	F13
3917	F13
3920	B13
3921	B12
3922	B12
3924	F15
3925	F12
3926	F12
3927	F12
3928	F13
4806	D 3
4807	E 3
5800	H20
5801	B12
5802	N26
5803	L 3
5804	L 4
6801	K 2
6802	L 2
6803	A16
6805	H28
6806	B17
6807	B17
7800	C11
7801	C22
7802	F25
7803	I13
7804	N15
7805	J25
7806	M25
7807	M 2
7808	B17
7810	N 2
7811	G14

*Version Table for * marked components*

VERSION / ITEM *	For sets without Remote Control	For sets with Remote Control
1814		*
1815		*
1822		*
2834		*
2851		*
2853	*	
2854	*	
3812	*	
3867		*
3924		*
4806 jumper	*	
4807 jumper	*	
5801		*
6801		*
6802	*	
7811		*

EVM DC voltages measured in CD play mode (mains supply)

④ indicates that component is used from print stage .4 onwards

Moby Combi A3 analog .4, 051295

COMBI Board ('A3')

MISCELLANEOUS

1101	4822 277 21779	SWITCH SLIDE,FM/MW/LW
1102	4822 277 21304	SWITCH SLIDE, FM/AM
1250	4822 277 20594	SWITCH SLIDE, Rec/Pb
1251	4822 277 30689	SWITCH SLIDE, MODE
1263	4822 267 31883	SOCKET 3,5mm Jack, MICRO
1800	4822 276 13587	SWITCH TACT
1801	4822 276 13587	SWITCH TACT
1802	4822 276 13587	SWITCH TACT
1803	4822 276 13587	SWITCH TACT
1804	4822 276 13587	SWITCH TACT
1805	4822 276 13587	SWITCH TACT
1806	4822 276 13587	SWITCH TACT
1812	4822 130 91462	LCD, FRD-13703AC
1814	4822 276 13587	SWITCH TACT
1815	4822 276 13587	SWITCH TACT

CAPACITORS

2101	4822 125 50681	VARCO TUNING			
2103	4822 122 33195	100pF	10%	50V	
2106	4822 125 50045	1,8-20pF TRIMCAP			
2120	4822 122 33192	27pF	5%	50V	
2125	4822 126 13674	27pF	5%	N330	
2127	4822 126 12939	2,2pF	10%	50V	
2130	4822 126 12284	5,6pF	5%	50V	
2131	4822 126 13506	100pF	5%	50V	
2132	4822 125 50045	1,8-20pF TRIMCAP			
2139	4822 121 51387	10nF	20%	16V	stage .4 onwards
2140	4822 124 41576	2,2µF	20%	50V	
2141	4822 124 41579	10µF	20%	50V	
2142	4822 124 41579	10µF	20%	50V	
2143	4822 126 12787	330pF	10%	50V	
2144	4822 124 40746	0,22µF	20%	63V	
2145	4822 124 41407	0,47µF	20%	63V	
2146	4822 124 41407	0,47µF	20%	63V	
2147	4822 124 40242	1µF	20%	63V	
2150	4822 126 12147	22nF	10%	25V	
2150	4822 126 13676	33nF	10%	25V	/17 only
2151	4822 126 12147	22nF	10%	25V	
2151	4822 126 13676	33nF	10%	25V	/17 only
2152	4822 124 40242	1µF	20%	63V	
2153	4822 124 40242	1µF	20%	63V	
2160	4822 124 40433	47µF	20%	25V	
2250©	5322 122 34123	1nF	10%	50V	
2251©	5322 122 34123	1nF	10%	50V	
2252	4822 124 41579	10µF	20%	50V	
2253	4822 124 41579	10µF	20%	50V	
2254©	5322 122 32531	100pF	5%	50V	
2255©	5322 122 32531	100pF	5%	50V	
2256	4822 121 43054	1,8nF	10%	50V	
2257	4822 124 41579	10µF	20%	50V	
2258	4822 126 10139	390pF	10%		
2259©	4822 122 33172	390pF	5%	50V	
2260	4822 124 40184	1000µF	20%	10V	
2261	4822 121 51387	10nF	20%	16V	
2262	4822 122 10466	220pF	10%		
2263©	4822 122 33575	220pF	5%	50V	
2264©	4822 122 32646	5,6nF	10%	50V	
2265	4822 126 13098	5,6nF	20%	16V	
2266	4822 121 51387	10nF	20%	16V	
2267	4822 124 41596	22µF	20%	50V	
2268	4822 124 40433	47µF	20%	25V	
2269	4822 124 40433	47µF	20%	25V	
2270	4822 122 33197	1nF	10%	50V	

CAPACITORS

2271	4822 122 33197	1nF	10%	50V	
2272	4822 121 51387	10nF	20%	16V	
2273	4822 121 51387	10nF	20%	16V	
2274	4822 124 40246	4,7µF	20%	63V	
2275©	5322 122 32654	22nF	10%	63V	
2276	4822 124 41596	22µF	20%	50V	
2277	4822 124 40246	4,7µF	20%	63V	
2278	4822 124 41596	22µF	20%	50V	
2279	4822 122 33519	470pF	10%	50V	
2280©	5322 122 34099	470pF	10%	63V	
2281©	5322 122 32654	22nF	10%	63V	
2282©	5322 122 32654	22nF	10%	63V	
2801	4822 124 40242	1µF	20%	63V	
2801	4822 124 41407	0,47µF	20%	63V	stage .4 onwards
2802©	4822 122 33496	100nF	10%	63V	
2803	4822 121 41856	22nF	5%	250V	
2804	4822 126 12339	2,2nF	10%	16V	
2805	5322 121 42386	100nF	5%	63V	
2806©	5322 122 32481	15pF	5%	50V	
2807	4822 122 33848	47pF	5%	50V	
2808	4822 124 40433	47µF	20%	25V	
2809	4822 124 40242	1µF	20%	63V	
2810	4822 124 40242	1µF	20%	63V	
2811	4822 122 33849	150pF	10%	50V	
2812	4822 122 33849	150pF	10%	50V	
2813©	4822 122 33496	100nF	10%	63V	
2814	4822 122 33195	100pF	10%	50V	
2815	4822 126 12882	100nF	20%	50V	
2816	4822 124 40746	0,22µF	20%	63V	stage .4 onwards
2816	4822 124 41407	0,47µF	20%	63V	
2817	4822 121 41856	22nF	5%	250V	
2818	4822 124 40242	1µF	20%	63V	
2819	5322 121 42386	100nF	5%	63V	
2820	4822 124 40746	0,22µF	20%	63V	
2821	4822 124 41576	2,2µF	20%	50V	
2822©	4822 122 33496	100nF	10%	63V	
2823	4822 124 40246	4,7µF	20%	63V	
2824	4822 124 41407	0,47µF	20%	63V	
2825	4822 126 13677	39pF	5%	50V	
2826	4822 124 41407	0,47µF	20%	63V	
2827	4822 124 40433	47µF	20%	25V	
2828	4822 124 41579	10µF	20%	50V	
2829	4822 121 41856	22nF	5%	250V	
2830	4822 122 10319	82pF	5%	50V	
2831	4822 121 41856	22nF	5%	250V	
2832	4822 124 41576	2,2µF	20%	50V	
2833	4822 124 40433	47µF	20%	25V	
2834	4822 126 11585	22nF	20%	50V	
2834©	5322 122 32654	22nF	10%	63V	stage .4 onwards
2835	4822 126 12882	100nF	20%	50V	
2836©	4822 122 33496	100nF	10%	63V	
2837	4822 126 11585	22nF	20%	50V	
2839	4822 121 51387	10nF	20%	16V	
2840	4822 122 33195	100pF	10%	50V	stage .4 onwards
2841©	5322 122 34123	1nF	10%	50V	stage .4 onwards
2842	4822 124 40849	330µF	20%	16V	
2843	4822 124 41584	100µF	20%	10V	
2844	4822 122 33197	1nF	10%	50V	stage .4 onwards
2849©	5322 122 34099	470pF	10%	63V	
2850©	5322 122 34099	470pF	10%	63V	
2851©	4822 122 33496	100nF	10%	63V	
2852©	5322 122 34123	1nF	10%	50V	stage .4 onwards
2853©	5322 122 32659	33pF	5%	50V	
2854	4822 121 51387	10nF	20%	16V	

CAPACITORS

2855©	5322 122 34099	470pF	10%	63V	stage .4 onwards
2856©	4822 122 33177	10nF	20%	50V	stage .4 onwards
2857©	4822 122 33177	10nF	20%	50V	stage .4 onwards
2858©	5322 122 32531	100pF	5%	50V	stage .4 onwards
2859©	4822 122 32627	2,7nF	10%	50V	stage .4 onwards

RESISTORS

3130	4822 116 52195	47Ω	5%	0,5W	
3139	4822 116 83864	10kΩ	5%	0,5W	stage .4 onwards
3140	4822 116 52297	68kΩ	5%	0,5W	
3141	4822 100 20167	50kΩ TRIMPOT. LIN.			
3142	4822 116 52256	2,2kΩ	5%	0,16W	
3143	4822 116 52234	100kΩ	5%	0,5W	
3144	4822 050 11002	1kΩ	5%	0,2W	
3150	4822 116 52238	12kΩ	5%	0,5W	
3151	4822 116 52238	12kΩ	5%	0,5W	
3152	4822 116 52283	4,7kΩ	5%	0,5W	
3153	4822 116 52283	4,7kΩ	5%	0,5W	
3160	4822 116 52195	47Ω	5%	0,5W	
3250	4822 116 52224	470Ω	5%	0,5W	
3251	4822 116 52224	470Ω	5%	0,5W	
3252	4822 116 52238	12kΩ	5%	0,5W	
3253	4822 116 52238	12kΩ	5%	0,5W	
3254	4822 116 52219	330Ω	5%	0,5W	
3255	4822 116 52219	330Ω	5%	0,5W	
3256	4822 116 52224	470Ω	5%	0,5W	
3257	4822 116 52224	470Ω	5%	0,5W	
3258©	4822 051 20474	470kΩ	5%	0,1W	
3259	4822 116 52213	180Ω	5%	0,5W	
3260©	4822 051 20273	27kΩ	5%	0,1W	
3261©	4822 051 20273	27kΩ	5%	0,1W	
3262	4822 116 52296	6,8kΩ	5%	0,5W	
3263	4822 116 52272	330kΩ	5%	0,5W	
3264©	4822 051 20154	150kΩ	5%	0,1W	
3265	4822 116 52245	150kΩ	5%	0,16W	
3266©	4822 051 20184	180kΩ	5%	0,1W	
3267	4822 116 52252	180kΩ	5%	0,5W	
3268	4822 116 52191	33Ω	5%	0,5W	
3269©	4822 051 20475	4,7MΩ	5%	0,1W	
3270	4822 116 52303	8,2kΩ	5%	0,5W	
3271	4822 116 52303	8,2kΩ	5%	0,5W	
3272	4822 116 52211	150Ω	5%	0,5W	
3273	4822 116 52244	15kΩ	5%	0,5W	
3274©	4822 051 20103	10kΩ	5%	0,1W	
3275	4822 116 83864	10kΩ	5%	0,5W	
3276	4822 116 52244	15kΩ	5%	0,5W	
3277	4822 116 52244	15kΩ	5%	0,5W	
3278	4822 116 52283	4,7kΩ	5%	0,5W	
3279	4822 116 52284	47kΩ	5%	0,5W	
3280	4822 116 52224	470Ω	5%	0,5W	
3281	4822 116 52224	470Ω	5%	0,5W	
3284©	4822 051 20472	4,7kΩ	5%	0,1W	
3285	4822 116 52283	4,7kΩ	5%	0,5W	
3286©	4822 051 20339	33Ω	5%	0,1W	
3800	4822 116 52257	22kΩ	5%	0,5W	
3801©	4822 051 20104	100kΩ	5%	0,1W	stage .3 only
3802	4822 052 10828 ▲	8,2Ω	5%	0,3W	
3803©	4822 051 20154	150kΩ	5%	0,1W	stage .4 onwards
3803	4822 116 52245	150kΩ	5%	0,16W	
3804	4822 050 11002	1kΩ	5%	0,2W	stage .3 only
3804©	4822 051 20471	470Ω	5%	0,1W	stage .4 onwards
3805©	4822 051 20008	CHIP JUMPER 0805			
3806©	4822 051 20153	15kΩ	5%	0,1W	stage .4 onwards
3808	4822 050 11002	1kΩ	5%	0,2W	

RESISTORS

3809©	4822 051 20562	5,6kΩ	5%	0,1W	
3810	4822 116 52271	33kΩ	5%	0,16W	
3811©	4822 051 20105	1MΩ	5%	0,1W	
3812©	4822 051 20332	3,3kΩ	5%	0,1W	
3813	4822 116 52175	100Ω	5%	0,5W	
3814	4822 116 52257	22kΩ	5%	0,5W	
3815	4822 116 52296	6,8kΩ	5%	0,5W	
3816	4822 116 52296	6,8kΩ	5%	0,5W	
3817	4822 116 52257	22kΩ	5%	0,5W	
3818	4822 116 52257	22kΩ	5%	0,5W	
3819	4822 116 52235	1MΩ	5%	0,5W	
3820	4822 116 52304	82kΩ	5%	0,5W	
3821	4822 116 52269	3,3kΩ	5%	0,5W	
3822©	4822 051 20563	56kΩ	5%	0,1W	
3823	4822 116 52244	15kΩ	5%	0,5W	
3824	4822 116 52211	150Ω	5%	0,5W	
3825	4822 116 83882	39kΩ	5%	0,5W	
3826	4822 116 52296	6,8kΩ	5%	0,5W	
3827	4822 116 52289	5,6kΩ	5%	0,16W	
3828	4822 116 83864	10kΩ	5%	0,5W	
3829	4822 116 83882	39kΩ	5%	0,5W	
3830	4822 116 52296	6,8kΩ	5%	0,5W	
3831	4822 116 52296	6,8kΩ	5%	0,5W	
3832	4822 116 83864	10kΩ	5%	0,5W	
3833	4822 116 52257	22kΩ	5%	0,5W	
3834	4822 116 52211	150Ω	5%	0,5W	
3835	4822 116 52184	18Ω	5%	0,5W	
3836	4822 050 11002	1kΩ	5%	0,2W	
3837	4822 111 50499	3,3MΩ	5%	0,2W	
3838	4822 116 52234	100kΩ	5%	0,5W	
3839	4822 117 11825	1,5MΩ	5%	0,4W	
3840	4822 050 11002	1kΩ	5%	0,2W	
3840©	4822 051 10102	1kΩ	2%	0,25W	stage .4 onwards
3841	4822 116 52298	680kΩ	5%	0,5W	
3842©	4822 051 20683	68kΩ	5%	0,1W	stage .4 onwards
3842	4822 116 52297	68kΩ	5%	0,5W	
3843	4822 116 52231	820Ω	5%	0,5W	
3844	4822 116 52291	56kΩ	5%	0,5W	
3845©	4822 051 10102	1kΩ	2%	0,25W	
3846	4822 050 11002	1kΩ	5%	0,2W	
3847	4822 116 81682	2,2MΩ	5%	0,5W	
3848	4822 116 52252	180kΩ	5%	0,5W	
3850	4822 116 52283	4,7kΩ	5%	0,5W	
3851	4822 116 52238	12kΩ	5%	0,5W	
3852	4822 116 52243	1,5kΩ	5%	0,16W	
3853	4822 116 52296	6,8kΩ	5%	0,5W	stage .4 onwards
3853	4822 116 52303	8,2kΩ	5%	0,5W	stage .3 only
3854	4822 116 52243	1,5kΩ	5%	0,16W	
3855	4822 116 83864	10kΩ	5%	0,5W	
3856	4822 116 52271	33kΩ	5%	0,16W	
3857	4822 116 52269	3,3kΩ	5%	0,5W	
3858©	4822 051 20101	100Ω	5%	0,1W	stage .4 onwards
3858©	4822 117 10353	150Ω	5%	0,1W	stage .3 only
3859	4822 116 83864	10kΩ	5%	0,5W	
3860	4822 116 52289	5,6kΩ	5%	0,16W	
3861©	4822 051 20223	22kΩ	5%	0,1W	
3863©	4822 051 20008	CHIP JUMPER 0805			stage .4 onwards
3865	4822 050 18208	8,2Ω	1%	0,4W	
3867©	4822 051 20222	2,2kΩ	5%	0,1W	
3868	4822 116 52191	33Ω	5%	0,5W	
3869©	4822 051 20472	4,7kΩ	5%	0,1W	
3870	4822 116 52257	22kΩ	5%	0,5W	
3871	4822 116 52257	22kΩ	5%	0,5W	
3872©	4822 051 20223	22kΩ	5%	0,1W	

RESISTORS

3873	4822 116 52257	22kΩ	5%	0,5W	
3880	4822 116 52202	82Ω	5%	0,16W	
3881	4822 116 52257	22kΩ	5%	0,5W	
3884	4822 116 83882	39kΩ	5%	0,5W	
3885©	4822 051 20223	22kΩ	5%	0,1W	
3886	4822 116 52235	1MΩ	5%	0,5W	
3887©	4822 051 10102	1kΩ	2%	0,25W	
3888©	4822 051 10102	1kΩ	2%	0,25W	
3889©	4822 051 20223	22kΩ	5%	0,1W	
3890	4822 050 11002	1kΩ	5%	0,2W	
3891	4822 050 11002	1kΩ	5%	0,2W	
3892	4822 050 11002	1kΩ	5%	0,2W	
3893	4822 050 11002	1kΩ	5%	0,2W	
3894	4822 050 11002	1kΩ	5%	0,2W	
3900©	4822 051 20472	4,7kΩ	5%	0,1W	
3901©	4822 051 20472	4,7kΩ	5%	0,1W	
3902©	4822 051 20472	4,7kΩ	5%	0,1W	
3904©	4822 051 20472	4,7kΩ	5%	0,1W	
3905©	4822 051 20472	4,7kΩ	5%	0,1W	
3906©	4822 051 20472	4,7kΩ	5%	0,1W	
3907©	4822 051 20472	4,7kΩ	5%	0,1W	
3908©	4822 051 20472	4,7kΩ	5%	0,1W	
3909©	4822 051 20472	4,7kΩ	5%	0,1W	
3911©	4822 051 20472	4,7kΩ	5%	0,1W	
3913©	4822 051 20104	100kΩ	5%	0,1W	stage .4 onwards
3914©	4822 051 20472	4,7kΩ	5%	0,1W	
3915©	4822 051 20472	4,7kΩ	5%	0,1W	
3916©	4822 051 20472	4,7kΩ	5%	0,1W	
3917©	4822 051 20472	4,7kΩ	5%	0,1W	
3920©	4822 051 20472	4,7kΩ	5%	0,1W	
3921©	4822 051 20472	4,7kΩ	5%	0,1W	
3922©	4822 051 20472	4,7kΩ	5%	0,1W	
3924©	4822 051 20101	100Ω	5%	0,1W	
3925©	4822 051 20472	4,7kΩ	5%	0,1W	
3926©	4822 051 20472	4,7kΩ	5%	0,1W	
3927©	4822 051 20472	4,7kΩ	5%	0,1W	
3928©	4822 051 20472	4,7kΩ	5%	0,1W	
4801©	4822 051 10008	CHIP JUMPER 1206			
4802©	4822 051 20008	CHIP JUMPER 0805			
4803©	4822 051 10008	CHIP JUMPER 1206			
4806©	4822 051 20008	CHIP JUMPER 0805			
4807©	4822 051 20008	CHIP JUMPER 0805			
4808©	4822 051 20008	CHIP JUMPER 0805			stage .4 onwards

COILS

5103	4822 157 62552	2,2μH	
5104	4822 157 53302	1μH	
5105	4822 156 21738	COIL VAR., MW-RF	
5106	4822 156 21739	COIL VAR., LW-RF	
5120	4822 157 53789	COIL VAR., FM-RF	
5125	4822 156 30947	RF COIL 1,5 TURNS	
5130	4822 156 21737	COIL VAR., MW-OSC.	
5131	4822 156 21737	COIL VAR., LW-OSC.	
5140	4822 158 60511	AM-IF FILTER 450kHz	
5142	4822 157 70302	AM-IF FILTER 450kHz	
5143	4822 242 81154	FILTER KIT, FM-IF	
5250	4822 156 20946	OSC.COIL 100kHz	
5800	4822 242 81865	CER.RES. 16,93MHz	
5801	4822 242 73769	CER. RES. 4,19MHZ	
5802	4822 157 50964	100μH	
5803	4822 157 62552	2,2μH	
5804	4822 157 53302	1μH	stage .4 onwards

DIODES

6101	4822 130 30621	1N4148	
6102	4822 130 30621	1N4148	
6138	4822 130 30621	1N4148	stage .4 onwards
6139	4822 130 30621	1N4148	stage .4 onwards
6250	4822 130 30621	1N4148	
6251	4822 130 30621	1N4148	
6252	4822 130 30621	1N4148	
6253	4822 130 30621	1N4148	
6254	4822 130 30621	1N4148	
6800	4822 130 30621	1N4148	stage .3 only
6801	4822 130 30621	1N4148	
6802	4822 130 30621	1N4148	
6803	4822 130 31554	BZX79-B4V3	stage .4 onwards
6803	5322 130 31504	BZX79-B3V3	stage .3 only
6805	4822 130 30621	1N4148	
6806	4822 130 30621	1N4148	stage .4 onwards
6807	4822 130 30621	1N4148	stage .4 onwards

TRANSISTORS

7251	4822 130 40937	BC548B	
7252	4822 130 44196	BC548C	
7253	4822 130 44196	BC548C	
7254	4822 130 40937	BC548B	
7804	5322 130 60068	BC558C	
7807	4822 130 41344	BC337-40	
7808	4822 130 44196	BC548C	stage .4 onwards
7810	4822 130 41344	BC337-40	

INTEGRATED CIRCUITS

7101©	4822 209 32746	TEA5711T/N2, RADIO IC
7250©	4822 209 32918	AN7318S, Rec/Pb-AMPLIFIER IC
7800©	4822 209 91052	TMP47C421ADF-AZ8050.3
7801©	4822 209 33339	SAA7345GP/M5, DECODER
7802©	4822 209 32196	TDA1311AT/N2, DAC
7803©	4822 209 90496	M62475FP, SERVO PROCESSOR
7805	4822 209 32852	TDA7073A/N2
7806	4822 209 32852	TDA7073A/N2
7811©	4822 209 90497	ST24C01CM6, EEPROM

INFRARED EYE Board

MISCELLANEOUS

7900	4822 212 30842	TFMS5360 (IR-EYE)

INTEGRATED CIRCUITS

7901©	5322 209 11147	HEF4093BT 4-fold SMITH TRIGGER

RESISTORS

3901©	4822 051 20223	22k	5%	0,1W
3902©	4822 051 20104	100k	5%	0,1W
3903©	4822 051 20104	100k	5%	0,1W
3904©	4822 051 20101	100R	5%	0,1W
3905©	4822 051 20103	10k	5%	0,1W
3906©	4822 051 20103	10k	5%	0,1W
4400©	4822 051 20008	CHIP JUMPER 0805		
4401©	4822 051 20008	CHIP JUMPER 0805		

CAPACITORS

2901©	5322 122 32268	470pF	10%	50V
2902©	5322 122 32268	470pF	10%	50V
2903	4822 124 41584	100μF	20%	10V
2904©	5322 122 34099	470pF	10%	63V
2905©	5322 122 34099	470pF	10%	63V

SURVEY OF CHANGES OF SERVICE MANUAL

4822 725 24957 - AZ8055, AZ8056, AZ8057

Changed/added pages introduced with Service Information A95-354:

Description	Page/Chapter	Reason
Feature/Amplifier-board '2'	5-1-1	Layout stage .7 added
COMBI-board	6-6, 6-7, 6-8, 6-9, 9-3a, 9-4a, 9-5a	Layout stage .4 added Updated partslist added
Changes	10-1	Survey of changes added

A96-359

Service
Service
Service

Product Service Group CE Audio

Service Information

Already published Service Informations: *A95-354 (4822 725 24967)*

NEW VERSIONS

The new version **AZ8057/14** for Poland was introduced.

Except printing on packaging AZ8057/14 is equal to AZ8057/00.

CORRECTION TO THE SERVICE MANUAL

EXPLODED VIEW / *drawing 1 (page 8-1)*

Description and position numbers 448 (knob slide *MODE*) and 449 (knob slide *BAND*) are interchanged in the Exploded View/drawing 1 of the service manual.
In the partslist the descriptions and the service code numbers are correct.

CHANGES IN COURSE OF PRODUCTION

FEATURE / AMPLIFIER - BOARD "3"

From approx. production week 9641 onwards *FEATURE/AMPLIFIER - BOARD* '3' will be used instead of *FEATURE/AMPLIFIER - BOARD* '2'.

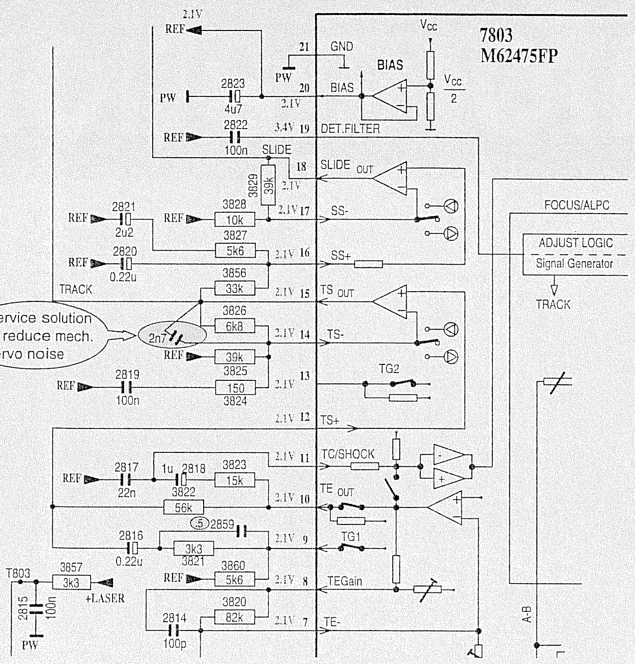
For the new Schematic Diagram, Assembly Drawing and partslist see attached sheets 5-3, 5-4, 9-6 and 9-7.

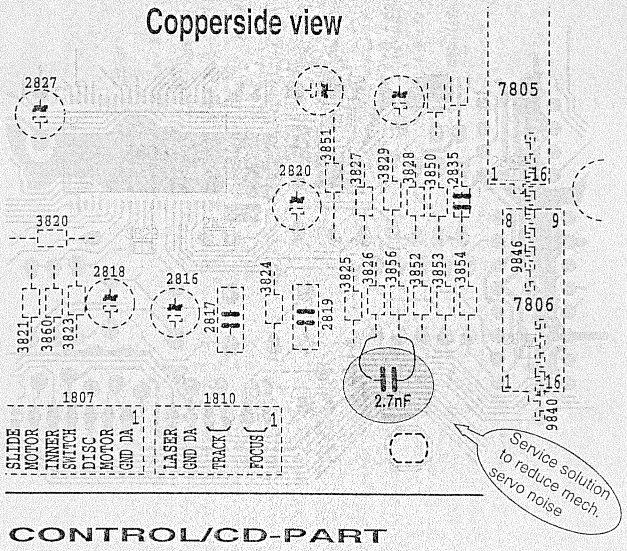
Combi - board "A3"

Symptom: The set gives a whistling sound when playing a disc.
It sounds like mechanical oscillation.

Cure: Service Solution for sets with COMBI-board layout stage .3 :
Add a 2,7nF capacitor 4822 126 12148 in parallel to R3826 on COMBI-board.
This will reduce the mechanical noise by approx. -8dB.

Remark: From layout stage .4 of COMBI-board onwards C2858 and C2859 were added to reduce the mechanical noise.
Introduction in production was week 9552. See also previous Service Information A95-354 (4822 725 24967).


7803
M62475FP
Vcc
BIAS
GND
DET.FILTER
SLIDE OUT
SS-
SS+
TS OUT
TS-
TS+
TG2
TC/SHOCK
TE OUT
TG1
TEGain
TE-
FOCUS/ALPC
ADJUST LOGIC
Signal Generator
TRACK
REF
PW
2.1V
Service solution to reduce mech. servo noise
2n7
2823
4u7
2822
100n
2821
2u2
2820
0.22u
3828
10k
3827
5k6
3856
33k
3826
6k8
39k
3825
150
3824
2819
100n
3829
39k
2817
22n
1u
2818
3823
15k
3822
56k
2859
2816
0.22u
3k3
3821
3860
5k6
3820
82k
2814
100p
3857
3k3
T803
2815
100n
+LASER
A-B


Copperside view
2827
7805
2820
3851
3827
3829
3828
3850
2835
3820
2818
2816
2817
3824
2819
3825
3826
3856
3852
3853
3854
9846
7806
9840
3821
3860
3823
1807
1810
SLIDE MOTOR
INNER SWITCH
DISC MOTOR
GND DA
LASER
GND DA
TRACK
FOCUS
2.7nF
Service solution to reduce mech. servo noise
CONTROL/CD-PART

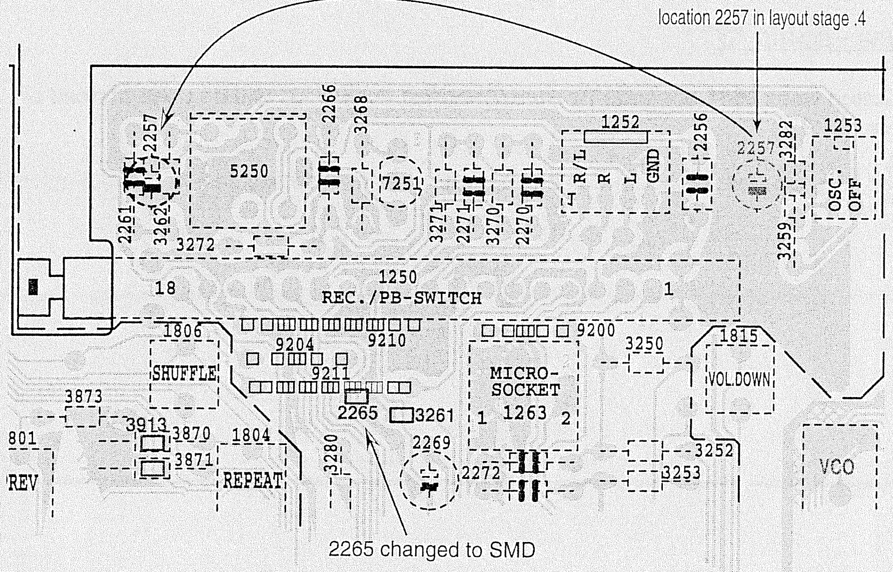
* **From production week 9630 onwards layout stage .6 has been implemented.**
(The layout stage can be identified by the last digit of the 12-figure number, printed in the copper pattern)

reason: - 2265 changed to SMD type to improve channel balance

2265 ©	5,6nF	10%	50V	4822 122 32646

- 2257 moved next to bias oscillator coil 5250 (2257 was handsoldered directly onto 5250)

copperside view


location 2257 in layout stage .4
2257
5250
2266
3268
7251
1252
R/L
R
L
GND
2256
2257
3282
1253
OSC. OFF
2261
3262
3272
3271
2271
3270
2270
3259
1250
18
REC./PB-SWITCH
1
1806
SHUFFLE
9204
9210
9211
9200
MICRO-SOCKET
1263
3250
1815
VOL.DOWN
3873
3913
3870
3871
1804
REPEAT
801
REV
2265
3261
3280
2269
2272
3252
3253
VCO
2265 changed to SMD

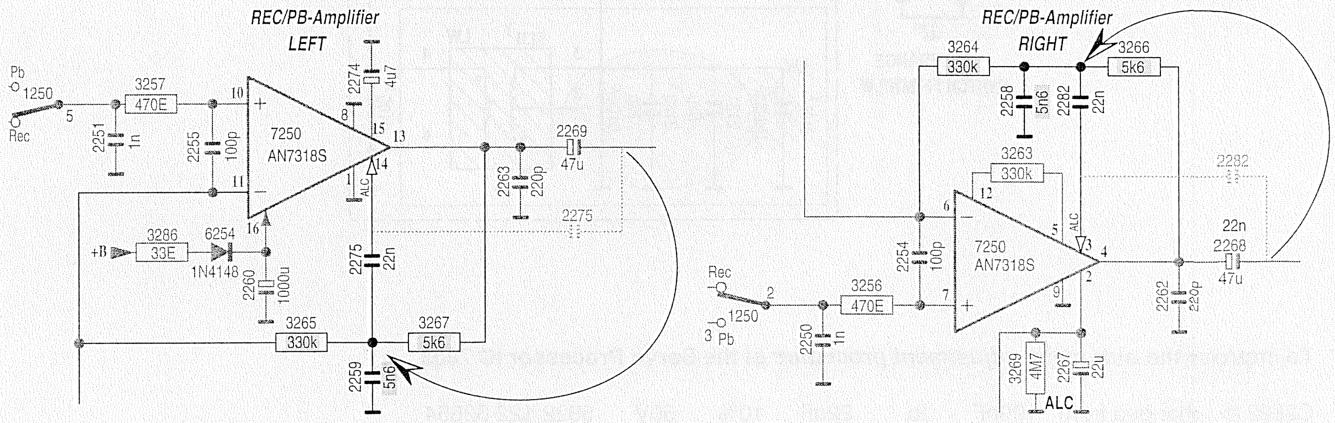
* **Symptom: Recording is unstable when recordings are made from a CD with high level variations (e.g. classical music)**

Cure:	change	2258	from	390pF	to	5,6nF	4822 126 13098
		2259 ©	from	390pF	to	5,6nF	4822 122 32646
		3264 ©	from	150k	to	330k	4822 051 20334
		3265	from	150k	to	330k	4822 116 52272
		3266 ©	from	180k	to	5,6k	4822 051 20562
		3267	from	180k	to	5,6k	4822 116 52289

remove 2282 (SMD) and connect tubular cap. 4822 126 11585 from pin 3 of IC7250 to junction 2258/3264/3266
remove 2275 (SMD) and connect tubular cap. 4822 126 11585 from pin14 of IC7250 to junction 2259/3265/3267

Remark: Problem is caused by high notes when the ALC-capacitor is charged to a level near to the operating threshold. Because of the recording pre-emphasis the recording amplifier has high amplification for the high notes. Feedback of the ALC-signal directly from the IC output intensifies the problem.

From production week 9626 onwards the above modification has been implemented as rework. The layout is adapted with layout stage .7 of COMBI-board "A3".

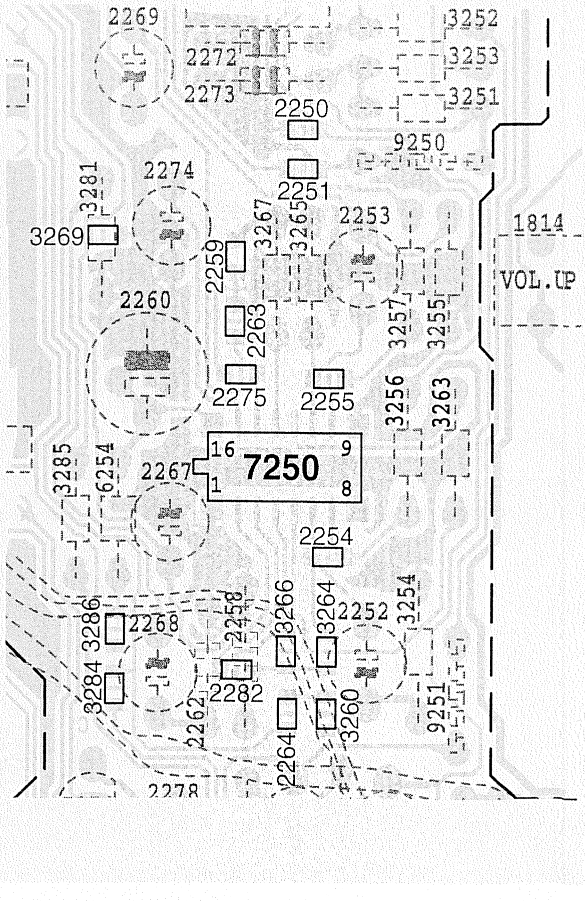

REC/PB-Amplifier
LEFT
Pb
1250
Rec
5
3257
470E
2251
1n
2255
100p
10
11
7250
AN7318S
8
15
13
14
1
ALC
2274
4u7
2269
47u
2263
220p
2275
3286
33E
6254
1N4148
+B
16
2260
1000u
2275
22n
3265
330k
3267
5k6
2259
5n6
REC/PB-Amplifier
RIGHT
3264
330k
3266
5k6
2258
5n6
2282
22n
3263
330k
12
6
5
ALC
3
4
2
9
7
7250
AN7318S
2254
100p
2282
22n
2268
47u
Rec
2
1250
3
Pb
3256
470E
2250
1n
2262
220p
3269
4M7
2267
22u
ALC

* **From production week 9641 onwards layout stage .7 has been implemented.**
(The layout stage can be identified by the last digit of the 12-figure number, printed in the copper pattern)

reason: layout adapted to changed ALC circuit.

changed area: REC/Pb-amplifier layout stage .7

2275 connected to junction 2259/3265/3267
2282 connected to junction 2258/3264/3266

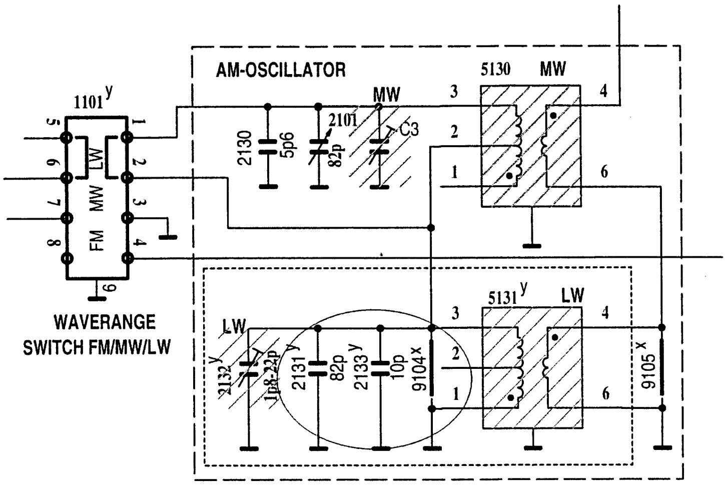

2269
2272
2273
3252
3253
3251
2250
9250
3281
2274
2251
3269
3267
3265
2253
1814
VOL.UP
2259
2260
2263
3257
3255
2275
2255
3256
3263
3285
6254
2267
16
9
7250
1
8
2254
3286
2268
2258
3266
3264
2252
3254
3284
2282
3260
2262
2264
9251
2278

*** C2843 changed from 100µF to 10µF 20% 50V 4822 124 41579**

reason: to avoid flickering of LCD after switching CD-mode on.

*** For easier alignment of the limit frequencies of the Longwave-range**

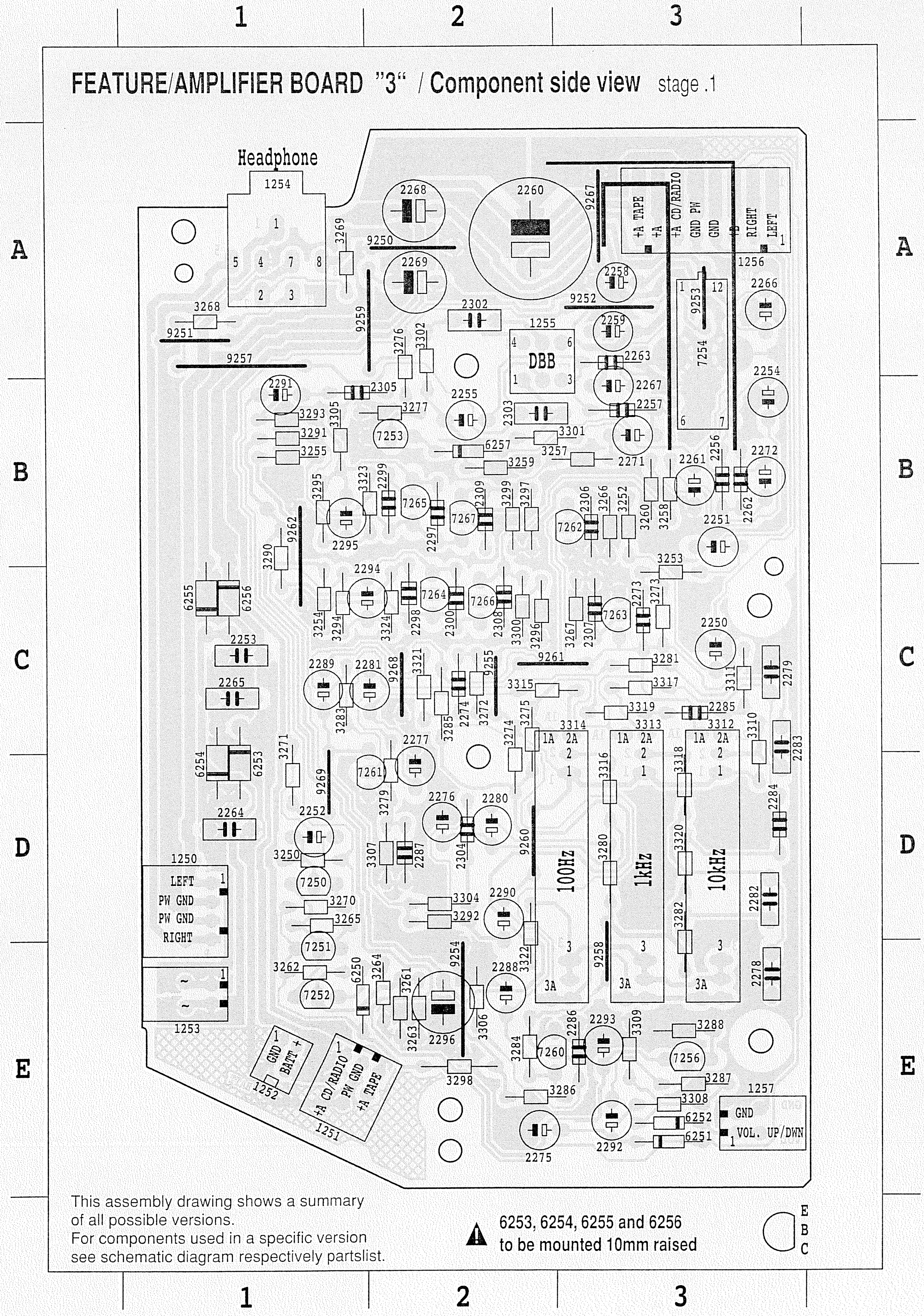
C2131	changed from 100pF to	82pF	5%/N750	50V	4822 126 13992
C2133	added instead of jumper 9104	10pF	5%/NP0	50V	4822 122 33847


AM-OSCILLATOR
1101y
1
2
3
4
5
6
7
8
9
LW
MW
FM
WAVERANGE SWITCH FM/MW/LW
2130
5p6
2101
82p
MW
C3
5130
MW
3
2
1
4
6
5131y
LW
2132y
1p8-22p
2131y
82p
2133y
10p
9104x
9105x

*** To improve the *automatic adjustment procedure* of the Servo Processor IC 7803**

C2822 © changed from 100nF to 22nF 10% 50V 5322 122 32654

FEATURE/AMPLIFIER BOARD "3" / Component side view stage .1


1
2
3
A
B
C
D
E
Headphone
1254
DBB
1255
100Hz
1kHz
10kHz
+A TAPE
+A
+A CD/RADIO
GND PW
GND
+B
RIGHT
LEFT
1256
1250
LEFT
PW GND
PW GND
RIGHT
1253
GND
BATT +
1252
+A CD/RADIO
PW GND
+A TAPE
1251
1257
GND
VOL. UP/DWN

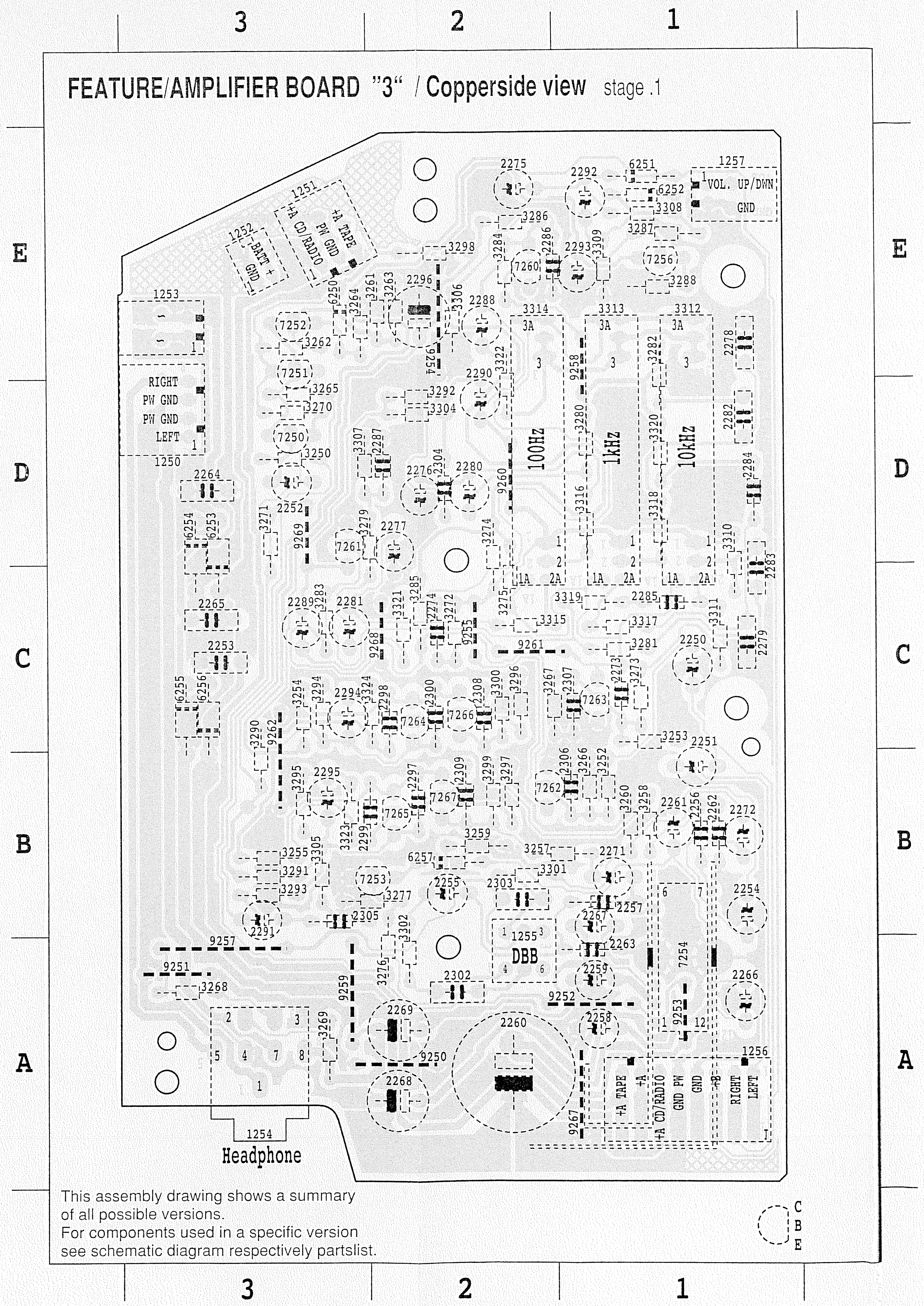
This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partslist.

▲ 6253, 6254, 6255 and 6256 to be mounted 10mm raised

E
B
C

1250	D	1
1251	E	1
1252	E	1
1253	E	1
1254	A	1
1255	A	2
1256	A	3
1257	E	3
2250	C	3
2251	B	3
2252	D	1
2253	C	1
2254	B	3
2255	B	2
2256	B	3
2257	B	3
2258	A	3
2259	A	3
2260	A	2
2261	B	3
2262	B	3
2263	A	3
2264	D	1
2265	C	1
2266	A	3
2267	B	3
2268	A	2
2269	A	2
2271	B	3
2272	B	3
2273	C	3
2274	C	2
2275	E	2
2276	D	2
2277	D	2
2278	E	3
2279	C	3
2280	D	2
2281	C	1
2282	D	3
2283	C	3
2284	D	3
2285	C	3
2286	E	3
2287	D	2
2288	E	2
2289	C	1
2290	D	2
2291	B	1
2292	E	3
2293	E	3
2294	C	1
2295	B	1
2296	E	2
2297	B	2
2298	C	2
2299	B	2
2300	C	2
2302	A	2
2303	B	2
2304	D	2
2305	B	1
2306	B	3
2307	C	3
2308	C	2
2309	B	2
3250	D	1
3252	B	3
3253	C	3
3254	C	1
3255	B	1
3257	B	3
3258	B	3
3259	B	2
3260	B	3
3261	E	2
3262	E	1
3263	E	2
3264	E	2
3265	D	1
3266	B	3
3267	C	3
3268	A	1
3269	A	1
3270	D	1
3271	D	1
3272	C	2
3273	C	3
3274	D	2
3275	C	2
3276	A	2
3277	B	2
3279	D	2
3280	D	3
3281	C	3
3282	E	3
3283	C	1
3284	E	2
3285	C	2
3286	E	2
3287	E	3
3288	E	3
3290	B	1
3291	B	1
3292	D	2
3293	B	1
3294	C	1
3295	B	1
3296	C	2
3297	B	2
3298	E	2
3299	B	2
3300	C	2
3301	B	2
3302	A	2
3304	D	2
3305	B	1
3306	E	2
3307	D	2
3308	E	3
3309	E	3
3310	D	3
3311	C	3
3312	D	3
3313	D	3
3314	D	2
3315	C	2
3316	D	3
3317	C	3
3318	D	3
3319	C	3
3320	D	3
3321	C	2
3322	D	2
3323	B	1
3324	C	2
6250	E	1
6251	E	3
6252	E	3
6253	D	1
6254	D	1
6255	C	1
6256	C	1
6257	B	2
7250	D	1
7251	E	1
7252	E	1
7253	B	2
7254	A	3
7256	E	3
7260	E	2
7261	D	1
7262	B	2
7263	C	3
7264	C	2
7265	B	2
7266	C	2
7267	B	2
9250	A	2
9251	A	1
9252	A	3
9253	A	3
9254	E	2
9255	C	2
9257	A	1
9258	E	3
9259	A	1
9260	D	2
9261	C	2
9262	B	1
9267	A	3
9268	C	2
9269	D	1

FEATURE/AMPLIFIER BOARD "3" / Copperside view stage .1


3
2
1
E
D
C
B
A
VOL. UP/DWN
GND
1257
1252
BATT +
GND
1251
+A CD/RADIO
PW GND
+A TAPE
1253
RIGHT
PW GND
PW GND
LEFT
1250
100Hz
1kHz
10kHz
DBB
1255
+A TAPE
+A
+A CD/RADIO
GND PW
GND
+B
RIGHT
LEFT
1256
1254
Headphone

This assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partslist.

C
B
E

Moby F3 stag.1 160996

1250 H22
1251 N 4
1252 M 4
1253 L 4
1254 F21
1255 I18

1256 B 1
1257 A 1
2250 B 5
2251 F 5
2252 G 2
2253 L 5

2254 F17
2255 G17
2256 F17
2257 G17
2258 E19
2259 G19

2260 E19
2261 F17
2262 F17
2263 G17
2264 L 5
2265 L 5

2266 E20
2267 G20
2268 F20
2269 F20
2271 F17
2272 E17

2273 F 6
2274 B 6
2275 B12
2276 C 9
2277 F 9
2278 C 9

2279 G 9
2280 B 9
2281 F 9
2282 C 9
2283 G 9
2284 D 9

2285 G 9
2286 C10
2287 G10
2288 D11
2289 G11
2290 E12

2291 H12
2292 B13
2293 B14
2294 C15
2295 F15
2296 G 4

2297 H14
2298 D14
2299 G14
2300 D14
2302 I18
2303 H18

2304 E13
2305 H13
2306 C 5
2307 F 5
2308 E15
2309 H15

3250 F 2
3252 B 5
3253 F 5
3254 D14
3255 G14
3257 F16

3258 E16
3259 G16
3260 F16
3261 H 2
3262 G 2
3263 H 2

3264 H 4
3265 F 3
3266 C 6
3267 F 6
3268 F20
3269 F20

3270 G 2
3271 F 3
3272 B 6
3273 E 6
3274 B 6
3275 E 6

3276 E17
3277 E17
3279 F 9
3280 B 9
3281 G 9
3282 C 9

3283 F10
3284 C10
3285 F10
3286 B10
3287 B13
3288 C13

3290 C14
3291 G14
3292 E13
3293 H13
3294 C15
3295 F15

3296 E14
3297 H14
3298 F 4
3299 H15
3300 E15
3301 H18

3302 I18
3304 E13
3305 H13
3306 C10
3307 G10
3308 B12

3309 C12
3310 D 8
3311 G 8
3312 D 7
3312 G 7
3313 C 8

3313 G 8
3314 C 8
3314 F 8
3315 F 8
3316 B 8
3317 G 8

3318 C 8
3319 G 9
3320 D 9
3321 H 8
3322 D 8
3323 G14

3324 C14
6250 H 4
6251 B12
6252 B12
6253 L 6
6254 K 5

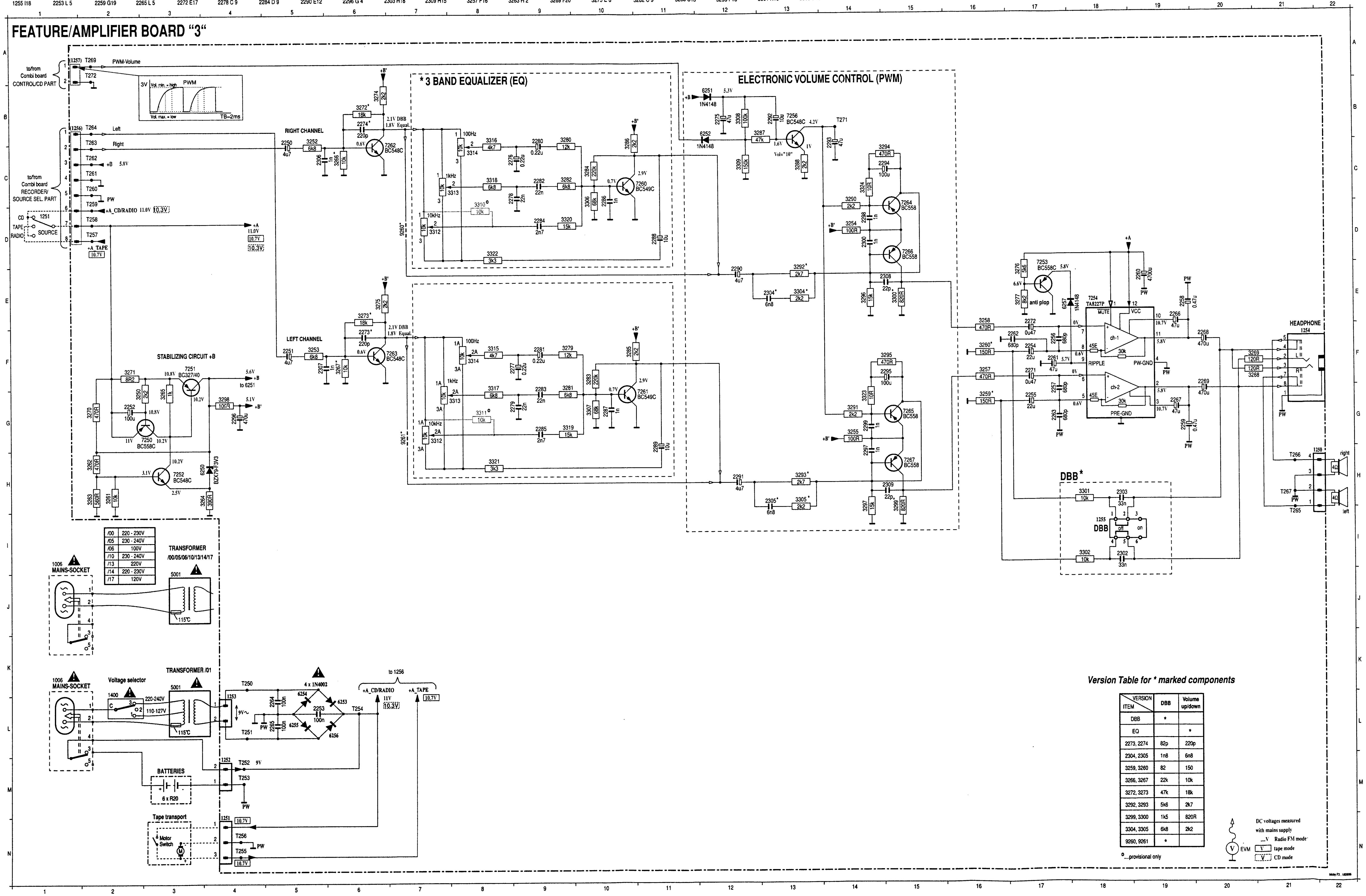
6255 L 5
6256 L 6
6257 E18
7250 G 2
7251 F 3
7252 H 3

7253 D17
7254 E18
7256 B13
7260 C11
7261 G11
7262 C 6

7263 F 6
7264 D15
7265 G15
7266 D15
7267 H15
9260 D 7

9261 G 7

FEATURE/AMPLIFIER BOARD “3“



1
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9
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11
12
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15
16
17
18
19
20
21
22
A
B
C
D
E
F
G
H
I
J
K
L
M
N
to/from Combi board CONTROL/CD PART
(1257) T269
PWM-Volume
T272
3V Vol. min. = high PWM
Vol. max. = low
TB=2ms
(1256) T264 Left
T263 Right
T262 +B 5.8V
T261
T260
to/from Combi board RECORDER/ SOURCE SEL. PART
T259 PW
+A_CD/RADIO 11.0V 10.3V
CD 1251 TAPE SOURCE RADIO
T258
T257
+A_TAPE 10.7V
+A 11.0V 10.7V 10.3V
RIGHT CHANNEL
LEFT CHANNEL
2250 4u7
3252 6k8
2251 4u7
3253 6k8
3272* 18k
2274* 220p
3273* 18k
2273* 220p
3274 2k2
3275 2k2
7262 BC548C
7263 BC548C
2.1V DBB 1.8V Equal.
9260*
9261*
* 3 BAND EQUALIZER (EQ)
100Hz
1kHz
10kHz
3316 4k7
3314
3313
3312
3318 6k8
3310° 10k
3311° 10k
2280 0.22u
3280 12k
2282 22n
3282 6k8
2284 2n7
3320 15k
3322 3k3
3284 220k
3286 2k2
7260 BC549C
3315 4k7
2281 0.22u
3279 12k
3317 6k8
2283 22n
3281 6k8
2285 2n7
3319 15k
3321 3k3
3283 220k
3285 2k2
7261 BC549C
2.9V
0.7V
STABILIZING CIRCUIT +B
3271 8R2
7251 BC327/40
10.8V
5.6V
+B to 6251
3298 100R
5.1V
+B'
2252 100u
3250 2k2
3265 1k
3270 470R
7250 BC558C
11V
10.2V
3262 470R
7252 BC548C
3.1V
2.5V
6250 BZX79-F3V3
3263 560R
3261 10k
3264 390R
ELECTRONIC VOLUME CONTROL (PWM)
6251 1N4148
6252 1N4148
5.3V
2275 47u
3308 100k
2292 10u
7256 BC548C
4.2V
T271
3287 47k
1.6V
1V
Vol="10"
3309 150k
3288 2k2
2293 47u
3294 470R
2294 100u
3324 10R
3290 2k2
7264 BC558
3254 100R
7266 BC558
2290 4u7
3292* 2k7
2304* 6n8
3304* 2k2
2308 22p
3296 15k
3300 820R
3295 470R
2295 100u
3323 10R
3291 2k2
7265 BC558
3255 100R
7267 BC558
2291 4u7
3293* 2k7
2305* 6n8
3305* 2k2
2309 22p
3297 15k
3299 820R
3276 5k6
7253 BC558C
5.8V
6.6V
3277 8k2
anti plop
6257 1N4148
7254 TA8227P
MUTE
VCC
2260 4700u
3258 470R
2272 0u47
2262 680p
3260* 150R
2254 22u
2261 47u
2256 680p
RIPPLE
ch-1
ch-2
PW-GND
PRE-GND
30k
45E
3257 470R
2271 0u47
3259* 150R
2255 22u
2257 680p
2263 680p
2266 47u
2258 0.47u
2268 470u
2267 47u
2259 0.47u
2269 470u
HEADPHONE 1254
3269 120R
3268 120R
T266
1250
right
T267
T265
left
4Ω
DBB*
3301 10k
2303 33n
1255 DBB off on
3302 10k
2302 33n
/00 220 - 230V
/05 230 - 240V
/06 100V
/10 230 - 240V
/13 220V
/14 220 - 230V
/17 120V
TRANSFORMER /00/05/06/10/13/14/17
1006 MAINS-SOCKET
5001
115°C
TRANSFORMER /01
Voltage selector
1400
220-240V
110-127V
1253
T250
4 x 1N4002
6254
6253
6255
6256
2264 100n
2265 100n
2253 100n
9V~
T251
T254
to 1256
+A_CD/RADIO 11V 10.3V
+A_TAPE 10.7V
1252
T252 9V
T253
BATTERIES
6 x R20
Tape transport
Motor Switch
1251
T256
T255
PW
Moby F3, 180995

Version Table for * marked components

VERSION / ITEM	DBB	Volume up/down
DBB	*	
EQ		*
2273, 2274	82p	220p
2304, 2305	1n8	6n8
3259, 3260	82	150
3266, 3267	22k	10k
3272, 3273	47k	18k
3292, 3293	5k6	2k7
3299, 3300	1k5	820R
3304, 3305	6k8	2k2
9260, 9261	*	

°....provisional only

EVM
DC voltages measured
with mains supply
....V Radio FM mode
V tape mode
V CD mode

CS 49 024

Feature/Amplifier Board “3“

MISCELLANEOUS

1254	4822 267 31468	SOCKET HEADPH. 3,5MM	
1255	4822 276 12648	SWITCH PUSH, DBB	
1400	4822 277 11575	VOLTAGE SELECTOR	/01/11 only

CAPACITORS

2250	4822 124 40246	4,7µF	20%	63V	
2251	4822 124 40246	4,7µF	20%	63V	
2252	4822 124 41584	100µF	20%	10V	
2253	5322 121 42386	100nF	5%	63V	
2254	4822 124 41596	22µF	20%	50V	
2255	4822 124 41596	22µF	20%	50V	
2256	4822 122 33169	680pF	10%	50V	
2257	4822 122 33169	680pF	10%	50V	
2258	4822 124 41407	0,47µF	20%	63V	
2259	4822 124 41407	0,47µF	20%	63V	
2260	4822 124 41458	4700µF	20%	16V	
2261	4822 124 40433	47µF	20%	25V	
2262	4822 122 33169	680pF	10%	50V	
2263	4822 122 33169	680pF	10%	50V	
2264	5322 121 42386	100nF	5%	63V	
2265	5322 121 42386	100nF	5%	63V	
2266	4822 124 40433	47µF	20%	25V	
2267	4822 124 40433	47µF	20%	25V	
2268	4822 124 41997	470µF	20%	10V	
2269	4822 124 41997	470µF	20%	10V	
2271	4822 124 40239	0,47µF	20%	63V	
2272	4822 124 40239	0,47µF	20%	63V	
2273	4822 122 10319	82pF	5%	50V	DBB version only
2273	4822 122 10466	220pF	10%	50V	Equalizer version only
2274	4822 122 10319	82pF	5%	50V	DBB version only
2274	4822 122 10466	220pF	10%		Equalizer version only
2275	4822 124 40433	47µF	20%	25V	
2276	4822 124 40746	0,22µF	20%	63V	Equalizer version only
2277	4822 124 40746	0,22µF	20%	63V	Equalizer version only
2278	4822 121 41856	22nF	5%	250V	Equalizer version only
2279	4822 121 41856	22nF	5%	250V	Equalizer version only
2280	4822 124 40746	0,22µF	20%	63V	Equalizer version only
2281	4822 124 40746	0,22µF	20%	63V	Equalizer version only
2282	4822 121 41856	22nF	5%	250V	Equalizer version only
2283	4822 121 41856	22nF	5%	250V	Equalizer version only
2284	4822 126 12148	2,7nF	10%	16V	Equalizer version only
2285	4822 126 12148	2,7nF	10%	16V	Equalizer version only
2286	4822 122 33197	1nF	10%	50V	Equalizer version only
2287	4822 122 33197	1nF	10%	50V	Equalizer version only
2288	4822 124 41579	10µF	20%	50V	Equalizer version only
2289	4822 124 41579	10µF	20%	50V	Equalizer version only
2290	4822 124 40246	4,7µF	20%	63V	
2291	4822 124 40246	4,7µF	20%	63V	
2292	4822 124 41579	10µF	20%	50V	
2293	4822 124 40433	47µF	20%	25V	
2294	4822 124 41584	100µF	20%	10V	
2295	4822 124 41584	100µF	20%	10V	
2296	4822 124 41997	470µF	20%	10V	
2297	4822 122 33197	1nF	10%	50V	
2298	4822 122 33197	1nF	10%	50V	
2299	4822 122 33197	1nF	10%	50V	
2300	4822 122 33197	1nF	10%	50V	
2302	5322 121 42489	33nF	5%	100V	DBB version only
2303	5322 121 42489	33nF	5%	100V	DBB version only
2304	4822 122 10576	1,8nF	10%	16V	DBB version only
2304	4822 126 13312	6,8nF	20%	16V	Equalizer version only
2305	4822 122 10576	1,8nF	10%	16V	DBB version only
2305	4822 126 13312	6,8nF	20%	16V	Equalizer version only
2306	4822 122 33197	1nF	10%	50V	

CAPACITORS

2307	4822 122 33197	1nF	10%	50V
2308	4822 122 33191	22pF	5%	50V
2309	4822 122 33191	22pF	5%	50V

RESISTORS

3250	4822 116 52256	2,2kΩ	5%	0,16W	
3252	4822 116 83961	6,8kΩ	5%	0,16W	
3253	4822 116 83961	6,8kΩ	5%	0,16W	
3254	4822 116 52175	100Ω	5%	0,5W	
3255	4822 116 52175	100Ω	5%	0,5W	
3257	4822 116 52224	470Ω	5%	0,5W	
3258	4822 116 52224	470Ω	5%	0,5W	
3259	4822 116 52202	82Ω	5%	0,16W	DBB version only
3259	4822 116 83868	150Ω	5%	0,5W	Equalizer version only
3260	4822 116 52202	82Ω	5%	0,16W	DBB version only
3260	4822 116 83868	150Ω	5%	0,5W	Equalizer version only
3261	4822 116 83864	10kΩ	5%	0,5W	
3262	4822 116 52224	470Ω	5%	0,5W	
3263	4822 116 52226	560Ω	5%	0,5W	
3264	4822 116 52222	390Ω	5%	0,16W	
3265	4822 050 11002	1kΩ	5%	0,2W	
3266	4822 116 52257	22kΩ	5%	0,5W	DBB version only
3266	4822 116 83864	10kΩ	5%	0,5W	Equalizer version only
3267	4822 116 52257	22kΩ	5%	0,5W	DBB version only
3267	4822 116 83864	10kΩ	5%	0,5W	Equalizer version only
3268	4822 116 52206	120Ω	5%	0,5W	
3269	4822 116 52206	120Ω	5%	0,5W	
3270	4822 116 52224	470Ω	5%	0,5W	
3271	4822 050 18208	8,2Ω	1%	0,4W	
3272	4822 116 52251	18kΩ	5%	0,5W	Equalizer version only
3272	4822 116 52284	47kΩ	5%	0,5W	DBB version only
3273	4822 116 52251	18kΩ	5%	0,5W	Equalizer version only
3273	4822 116 52284	47kΩ	5%	0,5W	DBB version only
3274	4822 116 52256	2,2kΩ	5%	0,16W	
3275	4822 116 52256	2,2kΩ	5%	0,16W	
3276	4822 116 52289	5,6kΩ	5%	0,16W	
3277	4822 116 52303	8,2kΩ	5%	0,5W	
3279	4822 116 52238	12kΩ	5%	0,5W	Equalizer version only
3280	4822 116 52238	12kΩ	5%	0,5W	Equalizer version only
3281	4822 116 83961	6,8kΩ	5%	0,16W	Equalizer version only
3282	4822 116 83961	6,8kΩ	5%	0,16W	Equalizer version only
3283	4822 116 83874	220kΩ	5%	0,5W	Equalizer version only
3284	4822 116 83874	220kΩ	5%	0,5W	Equalizer version only
3285	4822 116 52256	2,2kΩ	5%	0,16W	Equalizer version only
3286	4822 116 52256	2,2kΩ	5%	0,16W	Equalizer version only
3287	4822 116 52284	47kΩ	5%	0,5W	
3288	4822 116 52256	2,2kΩ	5%	0,16W	
3290	4822 116 52256	2,2kΩ	5%	0,16W	
3291	4822 116 52256	2,2kΩ	5%	0,16W	
3292	4822 116 52263	2,7kΩ	5%	0,5W	Equalizer version only
3292	4822 116 52289	5,6kΩ	5%	0,16W	DBB version only
3293	4822 116 52263	2,7kΩ	5%	0,5W	Equalizer version only
3293	4822 116 52289	5,6kΩ	5%	0,16W	DBB version only
3294	4822 116 52224	470Ω	5%	0,5W	
3295	4822 116 52224	470Ω	5%	0,5W	
3296	4822 116 52244	15kΩ	5%	0,5W	
3297	4822 116 52244	15kΩ	5%	0,5W	
3298	4822 116 52175	100Ω	5%	0,5W	
3299	4822 116 52231	820Ω	5%	0,5W	Equalizer version only
3299	4822 116 52243	1,5kΩ	5%	0,16W	DBB version only
3300	4822 116 52231	820Ω	5%	0,5W	Equalizer version only
3300	4822 116 52243	1,5kΩ	5%	0,16W	DBB version only
3301	4822 116 83864	10kΩ	5%	0,5W	DBB version only
3302	4822 116 83864	10kΩ	5%	0,5W	DBB version only

RESISTORS

3304	4822 116 52256	2,2kΩ	5%	0,16W	Equalizer version only
3304	4822 116 83961	6,8kΩ	5%	0,16W	DBB version only
3305	4822 116 52256	2,2kΩ	5%	0,16W	Equalizer version only
3305	4822 116 83961	6,8kΩ	5%	0,16W	DBB version only
3306	4822 116 52297	68kΩ	5%	0,5W	Equalizer version only
3307	4822 116 52297	68kΩ	5%	0,5W	Equalizer version only
3308	4822 116 52234	100kΩ	5%	0,5W	
3309	4822 116 52245	150kΩ	5%	0,16W	
3312	4822 100 12267	10kΩ SLIDE POTMETER			Equalizer version only
3313	4822 100 12267	10kΩ SLIDE POTMETER			Equalizer version only
3314	4822 100 12267	10kΩ SLIDE POTMETER			Equalizer version only
3315	4822 116 52283	4,7kΩ	5%	0,5W	Equalizer version only
3316	4822 116 52283	4,7kΩ	5%	0,5W	Equalizer version only
3317	4822 116 83961	6,8kΩ	5%	0,16W	Equalizer version only
3318	4822 116 83961	6,8kΩ	5%	0,16W	Equalizer version only
3319	4822 116 52244	15kΩ	5%	0,5W	Equalizer version only
3320	4822 116 52244	15kΩ	5%	0,5W	Equalizer version only
3321	4822 116 52269	3,3kΩ	5%	0,5W	Equalizer version only
3322	4822 116 52269	3,3kΩ	5%	0,5W	Equalizer version only
3323	4822 116 52176	10Ω	5%	0,5W	
3324	4822 116 52176	10Ω	5%	0,5W	

DIODES

6250	5322 130 31504	BZX79-B3V3
6251	4822 130 30621	1N4148
6252	4822 130 30621	1N4148
6253	5322 130 30684	1N4002
6254	5322 130 30684	1N4002
6255	5322 130 30684	1N4002
6256	5322 130 30684	1N4002
6257	4822 130 30621	1N4148

TRANSISTORS

7250	5322 130 60068	BC558C	
7251	4822 130 41327	BC327-40	
7252	4822 130 44196	BC548C	
7253	5322 130 60068	BC558C	
7256	4822 130 44196	BC548C	
7260	4822 130 44246	BC549C	Equalizer version only
7261	4822 130 44246	BC549C	Equalizer version only
7262	4822 130 44196	BC548C	
7263	4822 130 44196	BC548C	
7264	4822 130 44197	BC558B	
7265	4822 130 44197	BC558B	
7266	4822 130 44197	BC558B	
7267	4822 130 44197	BC558B	

INTEGRATED CIRCUITS

7254	4822 209 31544	TA8227P, POWER STAGE

SURVEY OF CHANGES OF SERVICE MANUAL

4822 725 24957 - AZ8055, AZ8056, AZ8057

Changed/added pages introduced with Service Information A95-354:

Description	Page/Chapter	Reason
Feature/Amplifier-board '2'	5-1-1	Layout stage .7 added
COMBI-board	6-6, 6-7, 6-8, 6-9, 9-3a, 9-4a, 9-5a	Layout stage .4 added Updated partslist added
Changes	10-1	Survey of changes added

Changed/added pages introduced with Service Information A96-359:

Description	Page/Chapter	Reason
Feature/Amplifier-board '3'	5-3, 5-4, 9-6, 9-7	Feature/Amplifier-board '2' replaced by Feature/Amplifier-board '3'
Changes	10-1a	Survey of changes updated

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PHILIPS

Art. Code: 42
Sachgebiet: Portable
Memo: de10stk

SI

Wichtig für die Werkstatt!
Nummer 42032
Datum: 11.08.96

4947
4961

Service Information

Betrifft: AZ8055, AZ8056, AZ8057
AZ8267

Verteiler: Sc F1

Tonhöhen bzw. Lautstärkeschwankungen bei Kassettenaufnahme

*Bei einigen Geräten kann es vorkommen, daß bei Aufnahmen auf Kassette Tonhöhen- bzw. Lautstärkeschwankungen auftreten. Grund dafür kann der Aufnahmeverstärker mit seiner ALC **A**utomatic **L**evel **C**ontrol sein. Dieser hat bei hohen Frequenzen eine zu große Verstärkung. Durch Änderung der Gegenkopplung kann dieses Problem behoben werden.*

Folgende Bauteile sind zu ändern:

1) Vergrößern des Widerstandes 3264 von 150kΩ auf 330kΩ
Bestellnummer 4822 051 20334

2) Vergrößern des Widerstandes 3265 von 150kΩ auf 330kΩ
Bestellnummer 4822 116 52272

3) Verkleinern des Widerstandes 3266 von 180kΩ auf 6.8kΩ
Bestellnummer 4822 051 20682

4) Verkleinern des Widerstandes 3267 von 180kΩ auf 6.8kΩ
Bestellnummer 4822 116 52296

5) Vergrößern des Kondensators 2258 und 2259 von 390pF auf 4,7nF
Bestellnummer 4822 126 11714

6) Entfernen des Kondensators 2282.

7) Verbinden des Pin 3 (IC7250) mit dem Knotenpunkt der Widerstände 3264 und 3266 durch einen Keramik Kondensator 22nF Bestellnummer 4822 126 11585 auf der Kupferseite

8) Entfernen des Kondensators 2275.

9) Verbinden des Pin 14 (IC7250) mit dem Knotenpunkt der Widerstände 3265 und 3267 durch einen Keramik Kondensator 22nF Bestellnummer 4822 126 11585 auf der Kupferseite

Diese Bauteile befinden sich auf dem Combi Board im Service Manual auf Seite 6-3.

Ab Woche 9626 ist diese Änderung in die Produktion eingeflossen.

4822 830 42032

Form 80048

Nachdruck nicht gestattet! Änderungen vorbehalten.